

SFUND RECORDS CTR
2160035

SEVERN
TRENT

STL

STL Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Tel: 916 373 5600 Fax: 916 372 1059
www.stl-inc.com

December 27, 2004

STL SACRAMENTO PROJECT NUMBER: G4L040206
PO/CONTRACT: W91238-04-F-0084

Dan Jablonski
CH2M Hill Inc
3 Hutton Centre Drive
Suite 200
Santa Ana, CA 92707

Dear Mr. Jablonski,

This report contains the analytical results for the sample received under chain of custody by STL Sacramento on December 4, 2004. This sample is associated with your Omega Chemical project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4362.

Sincerely,



Diana Brooks
Project Manager

TABLE OF CONTENTS

STL SACRAMENTO PROJECT NUMBER G4L040206

Case Narrative.....	1
STL Sacramento Quality Assurance Program	2
Sample Description Information.....	3
Chain of Custody Documentation.....	4
WATER, 1625 Modified, Semivolatiles by HRMS	6
Sample: 1	
Sample Data Sheet	
Method Blank Report	
Laboratory QC Reports	
WATER, 410.4, Demand, Chemical Oxygen	100-112
Sample: 1	
Sample Data Sheet	
Method Blank Report	
Laboratory QC Reports	

CASE NARRATIVE

STL SACRAMENTO PROJECT NUMBER G4L040206

WATER, 1625 Modified, Semivolatiles by HRMS

Sample(s): 1

The recovery for the internal standard for the d6-Nitrosodimethylamine (d6-NDMA) had a recovery below the recommended limit of 25%. This is directly due to losses during the solvent reduction steps due to the extreme volatility of these compounds.

Isotope dilution generally precludes any adverse impact to the target compound quantitation when a signal to noise of 10:1 is achieved. In all cases this criteria was met and there is no impact to the reported data.

Note: Isotope dilution recovery corrects for losses during extraction, and the sample preparation procedures

There were no other anomalies associated with this project.



STL Sacramento Certifications/Accreditations

Certifying State	Certificate #	Certifying State	Certificate #
Alaska	UST-055	Oregon	CA 200005
Arkansas	NA	South Carolina	87014001
Connecticut	PH-0691	Virginia	00178
Georgia	960	West Virginia	9930C, 334
Louisiana*	01944	NFESC	NA
Nevada	CA 044	USACE	NA
New York*	11666	USDA Foreign Plants	S-46613
		USDA Foreign Soil	

*NELAP accredited. A more detailed parameter list is available upon request.

QC Parameter Definitions

QC Batch: The QC batch consists of a set of up to 20 field samples that behave similarly (i.e., same matrix) and are processed using the same procedures, reagents, and standards at the same time.

Method Blank: An analytical control consisting of all reagents, which may include internal standards and surrogates, and is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background contamination.

Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD): An aliquot of blank matrix spiked with known amounts of representative target analytes. The LCS (and LCSD as required) is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. If an LCSD is performed, it may also be used to evaluate the precision of the process.

Duplicate Sample (DU): Different aliquots of the same sample are analyzed to evaluate the precision of an analysis.

Surrogates: Organic compounds not expected to be detected in field samples, which behave similarly to target analytes. These are added to every sample within a batch at a known concentration to determine the efficiency of the sample preparation and analytical process.

Matrix Spike and Matrix Spike Duplicate (MS/MSD): An MS is an aliquot of a matrix fortified with known quantities of specific compounds and subjected to an entire analytical procedure in order to indicate the appropriateness of the method for a particular matrix. The percent recovery for the respective compound(s) is then calculated. The MSD is a second aliquot of the same matrix as the matrix spike, also spiked, in order to determine the precision of the method.

Isotope Dilution: For isotope dilution methods, isotopically labeled analogs (internal standards) of the native target analytes are spiked into the sample at time of extraction. These internal standards are used for quantitation, and monitor and correct for matrix effects. Since matrix effects on method performance can be judged by the recovery of these analogs, there is little added benefit of performing MS/MSD for these methods. MS/MSD are only performed for client or QAPP requirements.

Control Limits: The reported control limits are either based on laboratory historical data, method requirements, or project data quality objectives. The control limits represent the estimated uncertainty of the test results.

Sample Summary

G4L040206

<u>WO#</u>	<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sampling Date</u>	<u>Received Date</u>
G0A6L	1	OC2-OW8-W-0-91	12/3/04 07:40 AM	12/4/04 10:15 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight

**Chain of
Custody Record**

SEVERN
TRENT

STL

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Possible Hazard Identification

Sample Disposal

Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

QC Requirements (Specify)

1. Relinquished By

21-8 Date *1-16-66* File No. *100-10000*

11. Received by

1. Relinquished By <i>Chris Ross</i>	Date 12/3/04	Time 1007	1. Received By <i>Chad West</i>	Date 12-4-04	Time 1100
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

> Comments

SEVERN
TRENT

STL

LOT RECEIPT CHECKLIST
STL Sacramento

CLIENT

Citizen Hill

PMAB

LOG # 29893

LOT# (QUANTIMS ID)

G4L040206

QUOTE# 60733

LOCATION W21B

DATE RECEIVED

12-4-04

TIME RECEIVED

1015

Initials

Date

as

12-4-04

DELIVERED BY

FEDEX

CA OVERNIGHT

CLIENT

AIRBORNE

GOLDENSTATE

DHL

UPS

BAX GLOBAL

GO-GETTERS

STL COURIER

COURIERS ON DEMAND

OTHER

CUSTODY SEAL STATUS

INTACT

BROKEN

N/A

CUSTODY SEAL #(S)

Seal

SHIPPING CONTAINER(S) STL

CLIENT

N/A

TEMPERATURE RECORD (IN °C)

IR

1 3 OTHER

COC #(S)

142902

TEMPERATURE BLANK

2°

SAMPLE TEMPERATURE

4°

COLLECTOR'S NAME:

Verified from COC.

Not on COC

pH MEASURED

YES

ANOMALY

N/A

LABELED BY

LABELS CHECKED BY

PEER REVIEW

NA

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING

WETCHEM

N/A

VOA-ENCORES

N/A

METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL

N/A

COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES

N/A

Clouseau

TEMPERATURE EXCEEDED (2 °C - 6 °C)*

N/A

WET ICE

BLUE ICE

GEL PACK

NO COOLING AGENTS USED

PM NOTIFIED

Notes:

*1 Acceptable temperature range for State of Wisconsin samples is $\leq 4^{\circ}\text{C}$.

WATER, 1625 Modified, Semivolatiles by
HRMS

CH2M Hill Inc

Client Sample ID: OC2-OW8-W-0-91

Trace Level Organic Compounds

Lot-Sample #....: G4L040206-001 Work Order #....: G0A6L1AC Matrix.....: WATER
 Date Sampled...: 12/03/04 Date Received...: 12/04/04
 Prep Date.....: 12/07/04 Analysis Date...: 12/08/04
 Prep Batch #....: 4342381
 Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
N-Nitrosodimethylamine	680	2.0	ng/L	CFR136A 1625 Modi
1,2,3-Trichloropropane	65	5.0	ng/L	CFR136A 1625 Modi
<u>INTERNAL STANDARDS</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
N-Nitrosodimethylamine-d6	23 *	(25 - 150)		
1,2,3-Trichloropropane-d5	104	(25 - 150)		

NOTE(S):

* Surrogate recovery is outside stated control limits.

QC DATA ASSOCIATION SUMMARY

G4L040206

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	MCAWW 410.4		4342133	4342096
	WATER	CFR136A 1625 Modi		4342381	

METHOD BLANK REPORT

Trace Level Organic Compounds

Client Lot #....: G4L040206 Work Order #....: G0FX01AA Matrix.....: WATER
MB Lot-Sample #: G4L070000-381
Analysis Date...: 12/08/04 Prep Date.....: 12/07/04
Dilution Factor: 1 Prep Batch #: 4342381

<u>PARAMETER</u>	<u>RESULT</u>	DETECTION		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
N-Nitrosodimethylamine	ND	2.0	ng/L	CFR136A 1625 Modi
1,2,3-Trichloropropane	ND	5.0	ng/L	CFR136A 1625 Modi

<u>INTERNAL STANDARDS</u>	<u>PERCENT</u>	RECOVERY	
		<u>RECOVERY</u>	<u>LIMITS</u>
N-Nitrosodimethylamine-d6	21 *	(25 - 150)	
1,2,3-Trichloropropane-d5	84	(25 - 150)	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Surrogate recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

Trace Level Organic Compounds

Client Lot #....: G4L040206 Work Order #....: G0FX01AC Matrix.....: WATER
LCS Lot-Sample#: G4L070000-381
Prep Date.....: 12/07/04 Analysis Date...: 12/08/04
Prep Batch #....: 4342381
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
N-Nitrosodimethylamine	87	(70 - 130)	CFR136A 1625 Modifie
1,2,3-Trichloropropane	90	(50 - 150)	CFR136A 1625 Modifie

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
N-Nitrosodimethylamine-d6	28	(25 - 150)
1,2,3-Trichloropropane-d5	70	(25 - 150)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot #....: G4L040206 Work Order #....: G0FX01AC Matrix.....: WATER
 LCS Lot-Sample#: G4L070000-381
 Prep Date.....: 12/07/04 Analysis Date...: 12/08/04
 Prep Batch #....: 4342381
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE</u>	<u>MEASURED</u>	<u>UNITS</u>	<u>PERCENT</u>	<u>METHOD</u>
	<u>AMOUNT</u>	<u>AMOUNT</u>		<u>RECOVERY</u>	
N-Nitrosodimethylamine	100	87.4	ng/L	87	CFR136A 1625
1,2,3-Trichloropropane	100	89.7	ng/L	90	CFR136A 1625

<u>INTERNAL STANDARD</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
N-Nitrosodimethylamine-d6	28	(25 - 150)
1,2,3-Trichloropropane-d5	70	(25 - 150)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Raw Data Package

Run/Batch Data

Includes (as applicable):

runlogs

continuing calibration standards

interference/performance check standards

continuing calibration blanks

method blanks

Ics

ms/sd

sample raw data

ms tune data

Quantitation Summary

STL

Page 2 of

Run text: G0FX0-1-AAB Sample text: G0FX0-1-AAB :G4L040125~1MB
 Run #7 Filename: 08DE045SP S: 10 I: 1 Results: 08DE045SP1625
 Acquired: 8-DEC-04 19:39:35 Processed: 9-DEC-04 15:10:42
 Run: 08DE045SP Analyte: 1625 Cal: 16251208045SP
 Factor 1: 1.000 Factor 2: 1.000 Sample size: 1.000 L

Name	Resp	RA	RT	RRF	Conc	QC	EDL	Rec	M
2-Chloropyridine	50861900		11:08	-	354.08		-	-	n
D8-1,4-Dioxane	36590100		5:13	0.92	155.63		0.30	15.6	y
1,4-Dioxane	2316150		5:13	1.13	56.27	<10	2.49	-	n
D5-123-TriChloroPropane	54193400		10:04	2.52	84.42		0.21	84.4	n
1,2,3-TriChloroPropane	*		Not Fnd	0.50	*	<5.0	1.47	-	n
1,2,3-TriChloroPropane	*		Not Fnd	-	*		-	-	n
D6-NDMA	7435450		10:15	1.40	20.86		0.15	20.9	n
NDMA	101162		10:15	1.76	0.77	<2.0	9.77	6.55	y
2-Chloropyridine	170555000		11:08	-	359.38		-	-	n

12/17/04

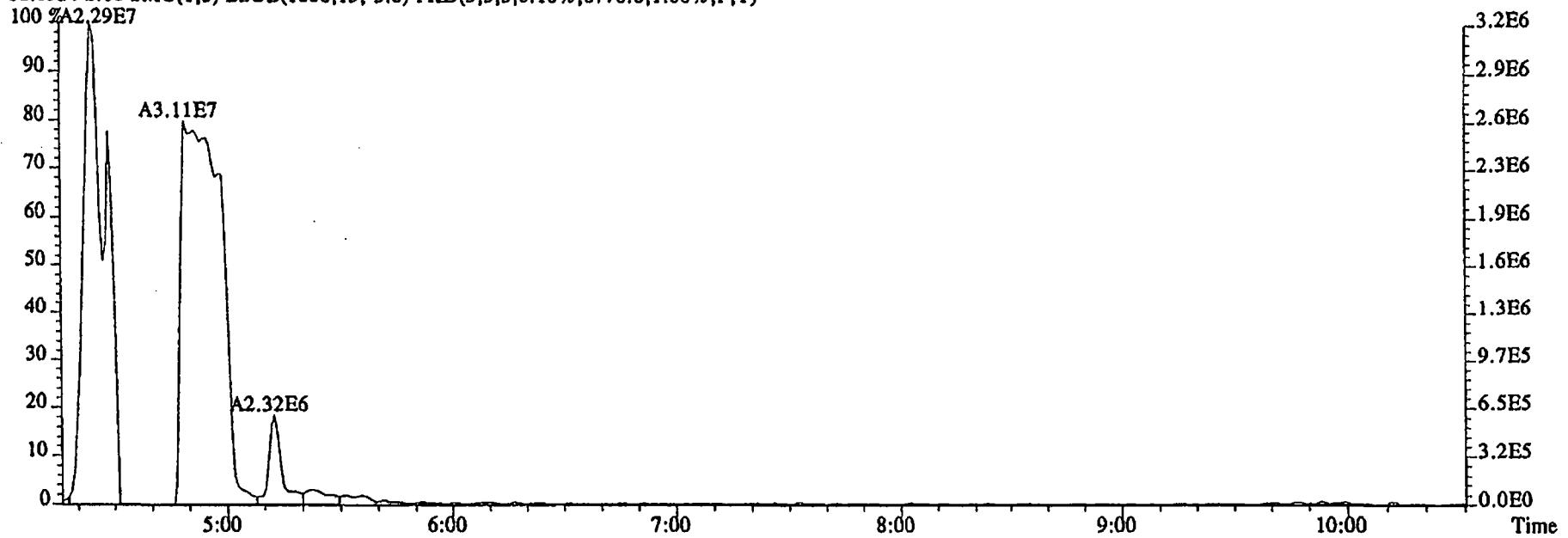
C

Run text: G0FX0-1-AAB Sample text: G0FX0-1-AAB :G4L040125-1MB
 Run #7 Filename: 08DE045SP S: 10 I: 1 Results: 08DE045SP1625
 Acquired: 8-DEC-04 19:39:35 Processed: 9-DEC-04 15:10:42
 Run: 08DE045SP Analyte: 1625 Cal: 16251208045SP
 Factor 1: 1.000 Factor 2: 1.000 Sample size: 1.000 L

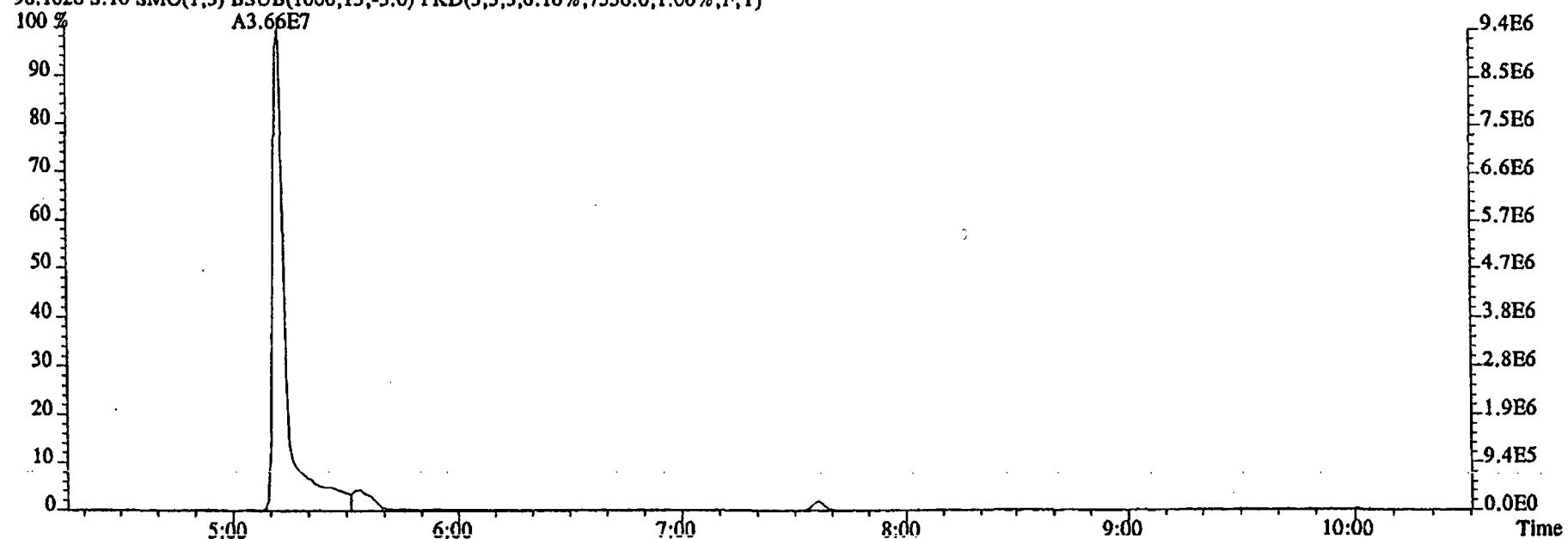
Name	Resp	RA	RT	RRF	Conc	µL	EDL	Rec	M
2-Chloropyridine	50861900		11:08	-	354.08		-	-	n
D8-1,4-Dioxane	36590100		5:13	0.92	155.63		0.30	15.6*	n
1,4-Dioxane	2316150		5:13	1.13	56.27	<1000	2.49	-	n
D5-123-TriChloroPropane	54193400		10:04	2.52	84.42	*	0.21	84.4	n
1,2,3-TriChloroPropane	*		Not Fnd	0.50	*	<	1.47	-	n
1,2,3-TriChloroPropane	*		Not Fnd	-	*		-	-	n
D6-NDMA	7435450		10:15	1.40	20.86		0.15	20.9*	n
NDMA	*		Not Fnd	1.76	*	9.77	-	-	n
2-Chloropyridine	170555000		11:08	-	359.38		-	-	n

12-16-54
O'

File:08DE04SSP #1-462 Acq: 8-DEC-2004 19:39:35 GC EI+ Voltage SIR 70SE
Sample#10 Text:G0FX0-1-AAB :G4L040125-1MB Exp:NDMAVOA
88.0524 S:10 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,8776.0,1.00%,F,T)
100 %A2.29E7



96.1026 S:10 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,7556.0,1.00%,F,T)

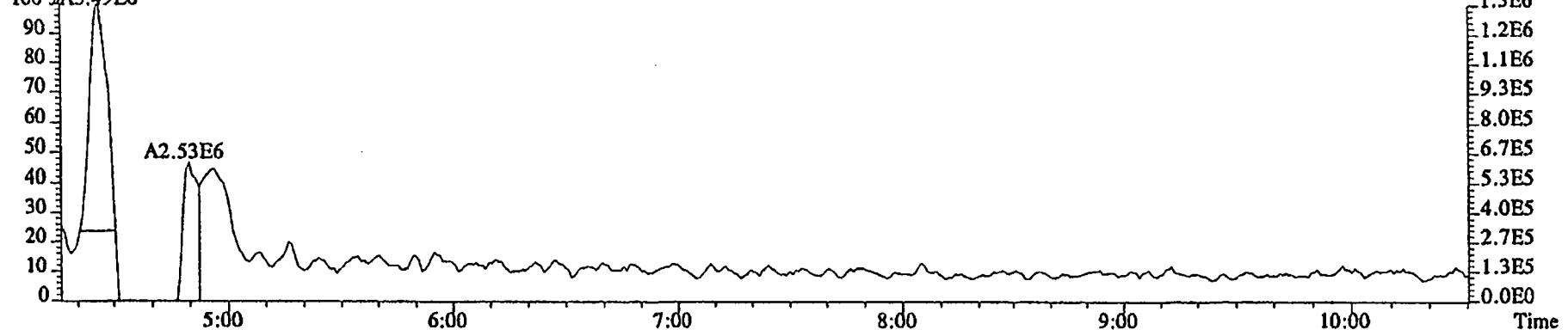


File:08DE045SP #1-462 Acq: 8-DEC-2004 19:39:35 GC EI+ Voltage SIR 70SE

Sample#10 Text:G0FX0-1-AAB :G4L040125-1MB Exp:NDMAVOA

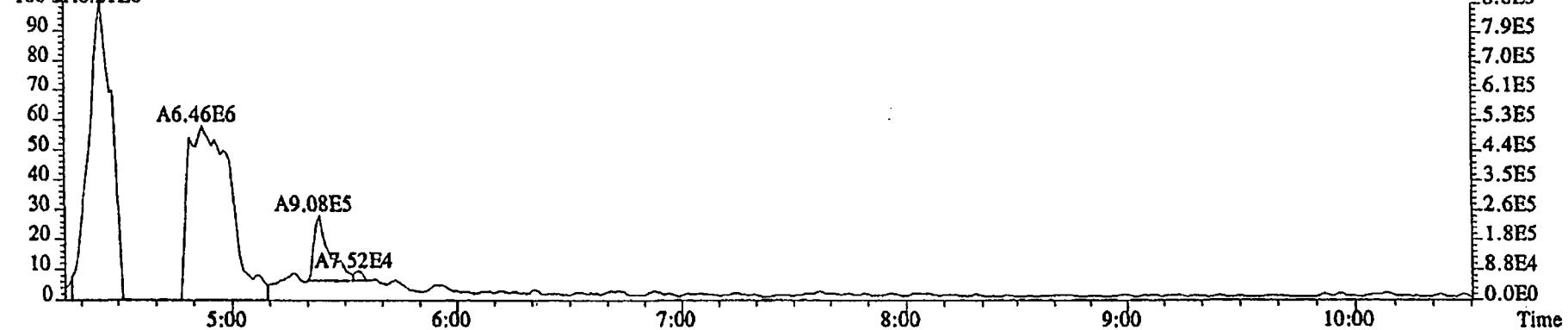
75.0002 S:10 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,196736.0,1.00%,F,T)

100 %A5.49E6



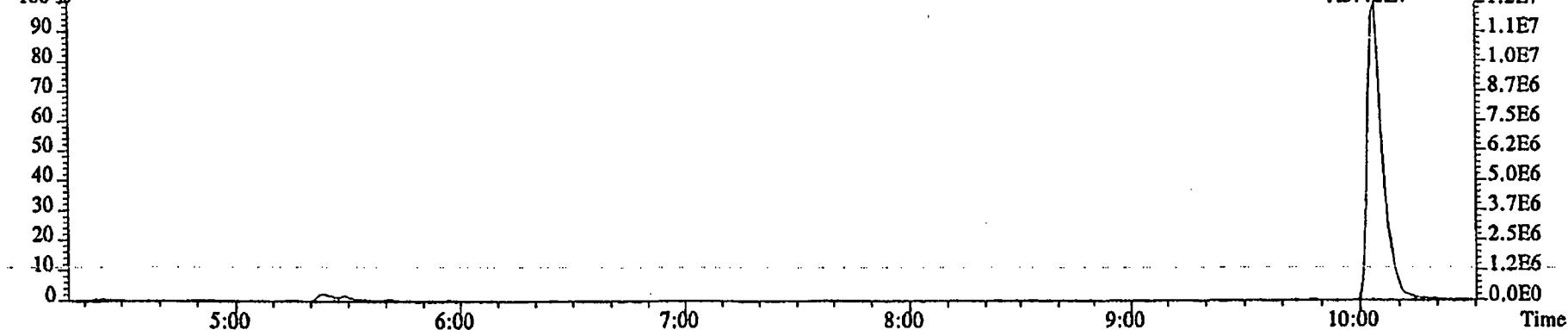
76.9972 S:10 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,30716.0,1.00%,F,T)

100 %A6.21E6

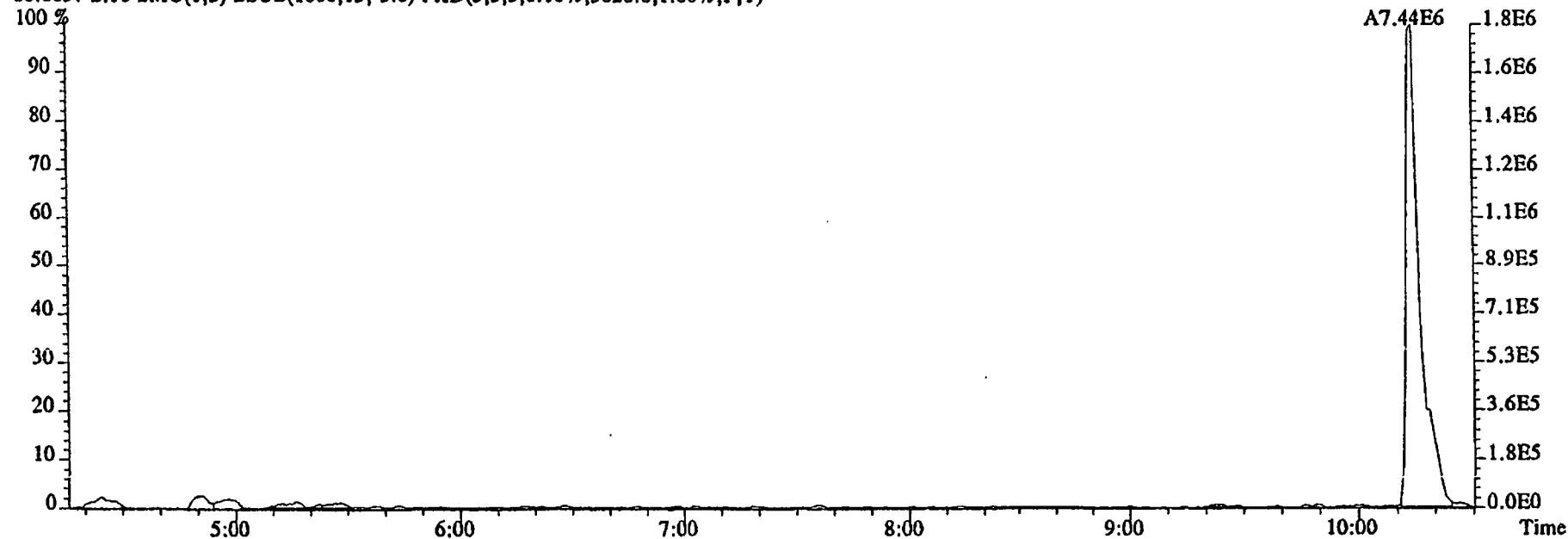
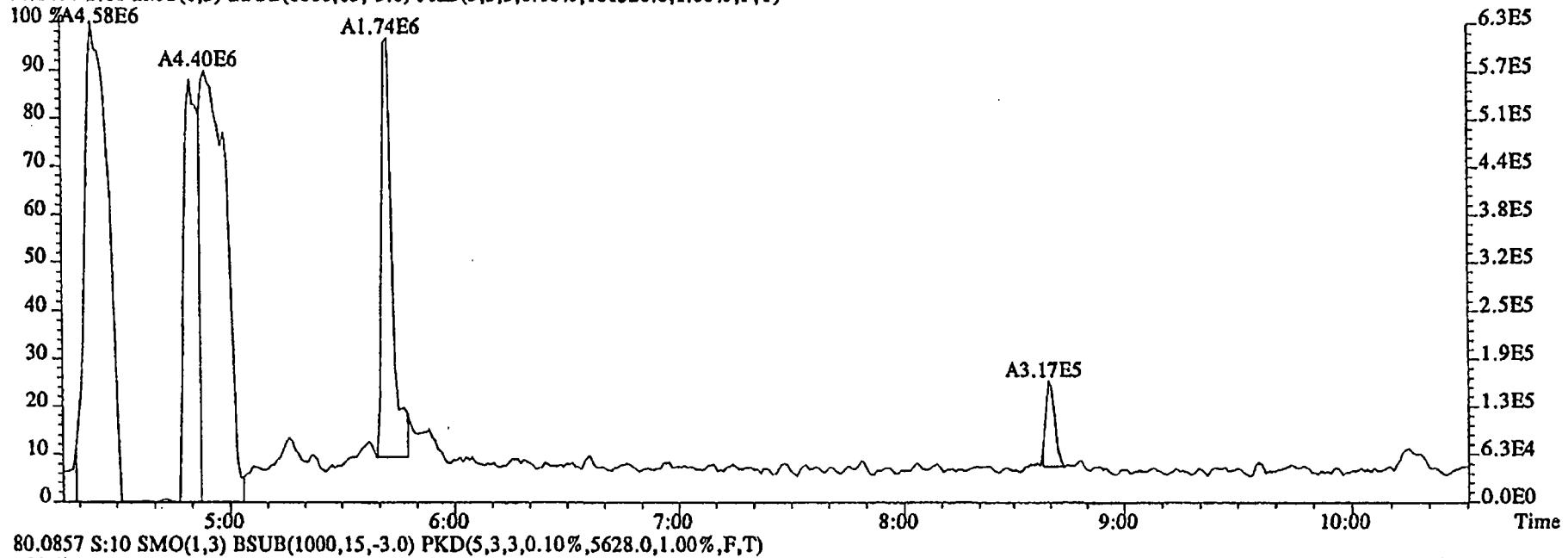


79.0253 S:10 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,14260.0,1.00%,F,T)

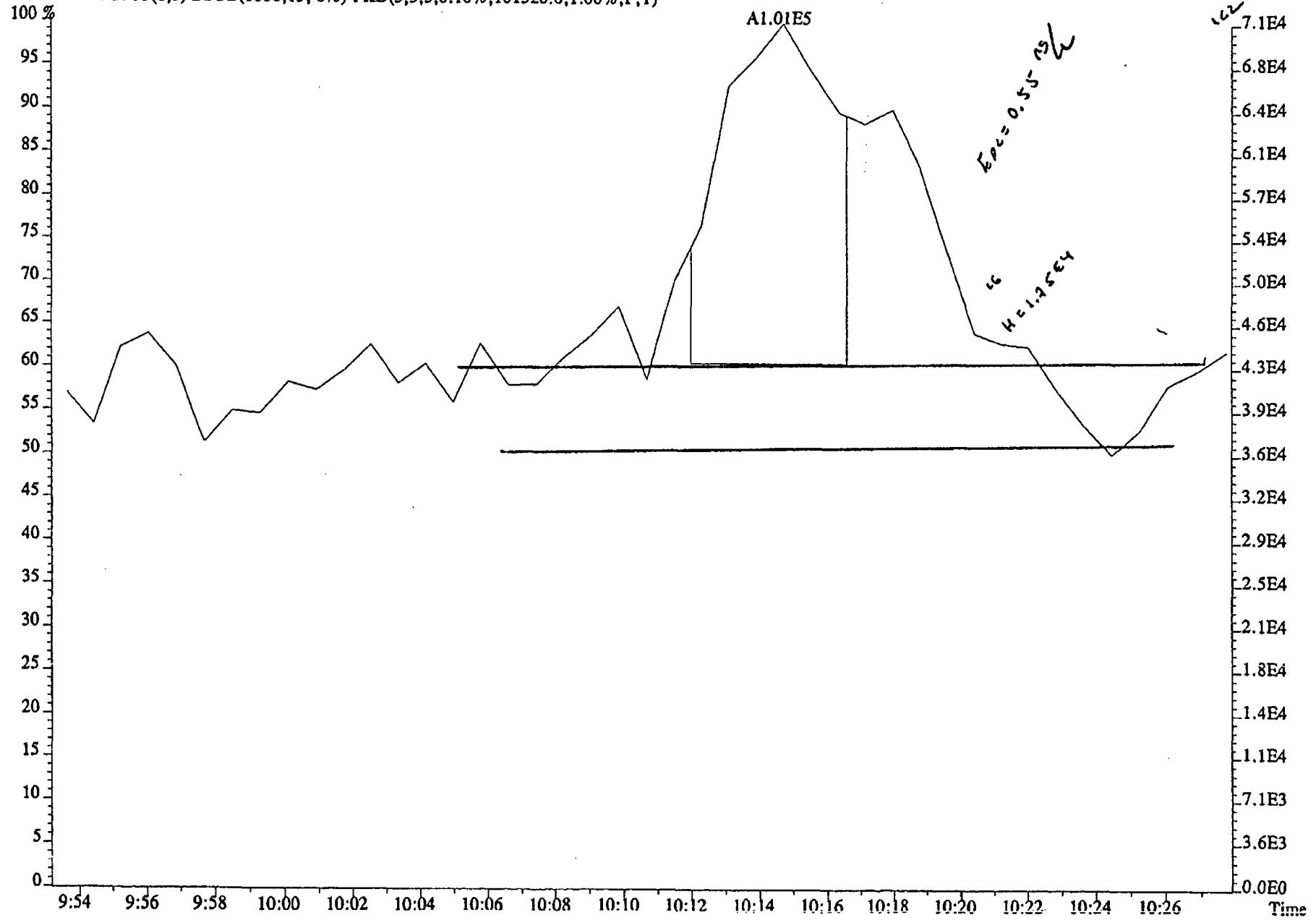
100 %



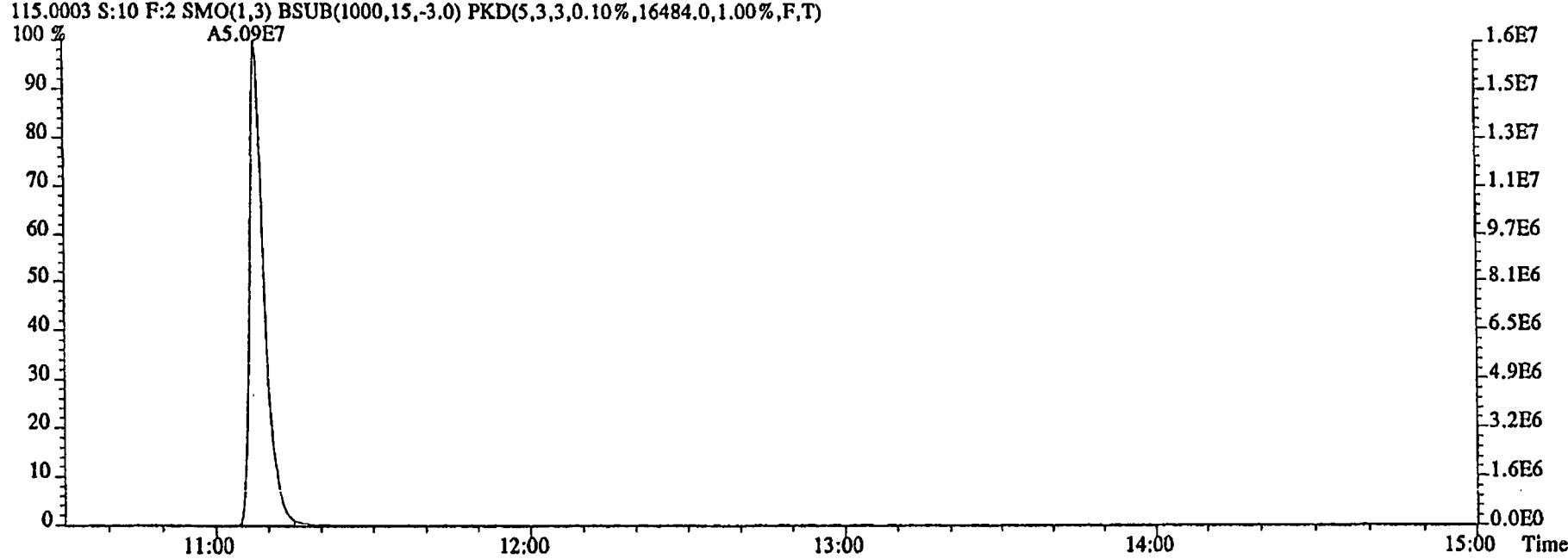
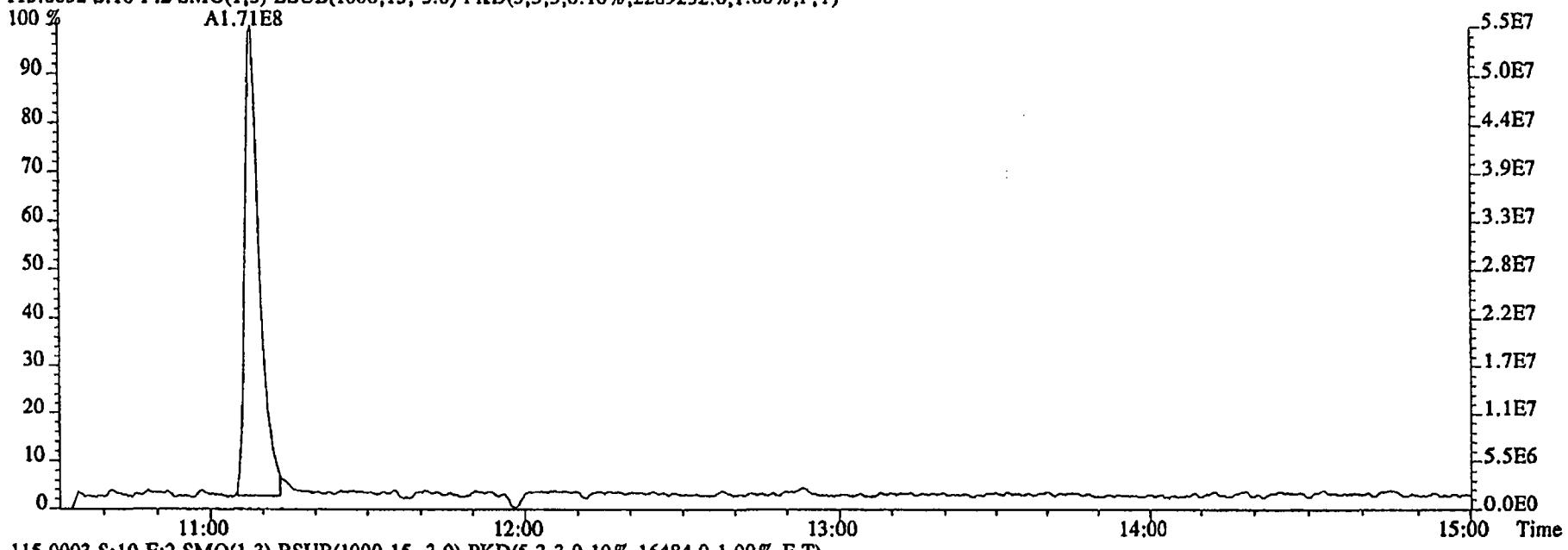
File:08DE045SP #1-462 Acq: 8-DEC-2004 19:39:35 GC EI+ Voltage SIR 70SE
Sample#10 Text:G0FX0-1-AAB :G4L040125-1MB Exp:NDMAVOA
74.0480 S:10 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,101520.0,1.00%,F,T)



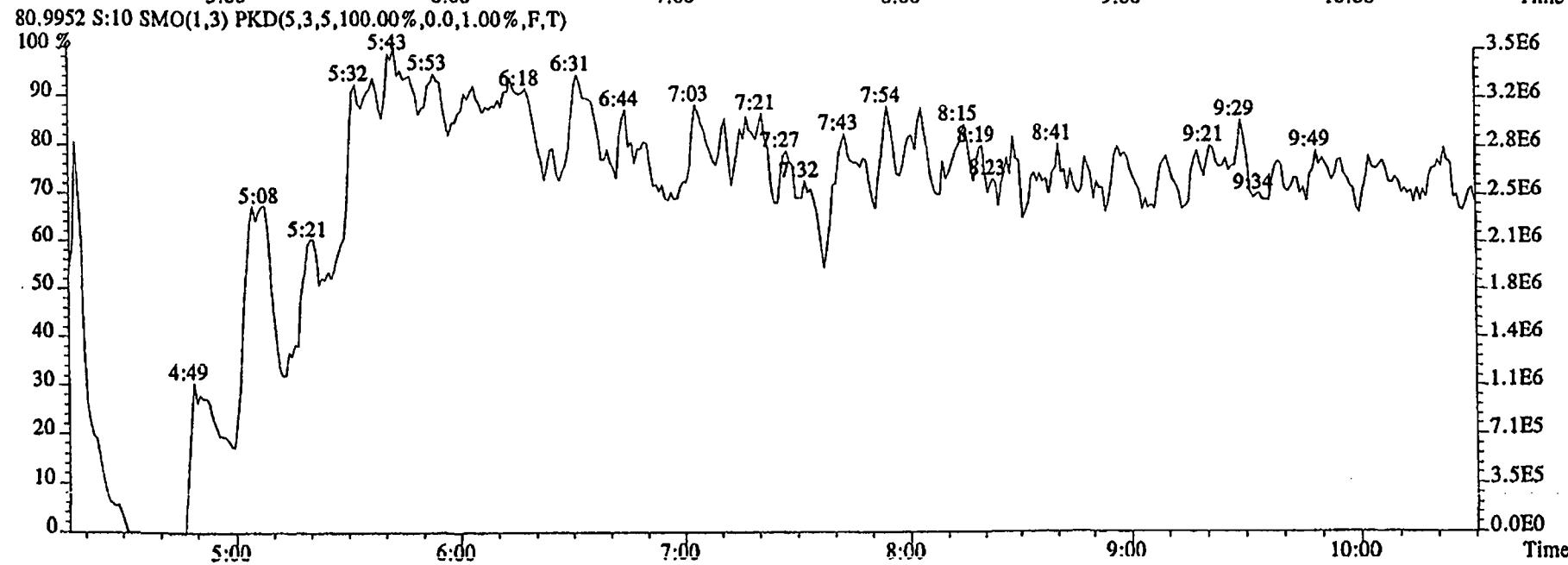
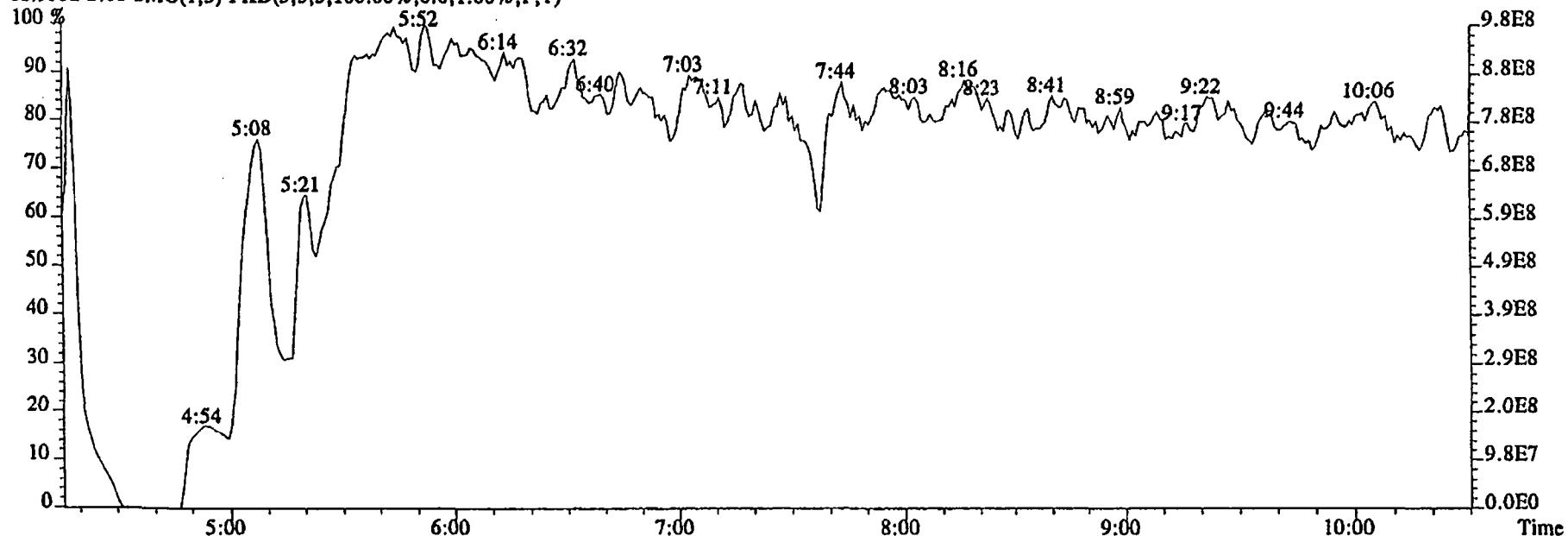
File:08DE045SP #1-462 Acq: 8-DEC-2004 19:39:35 GC EI+ Voltage SIR 70SE
 Sample#10 Text:G0FX0-1-AAB :G4L040125-1MB Exp:NDMAVOA
 74.0480 S:10 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,101520.0,1.00%,F,T)



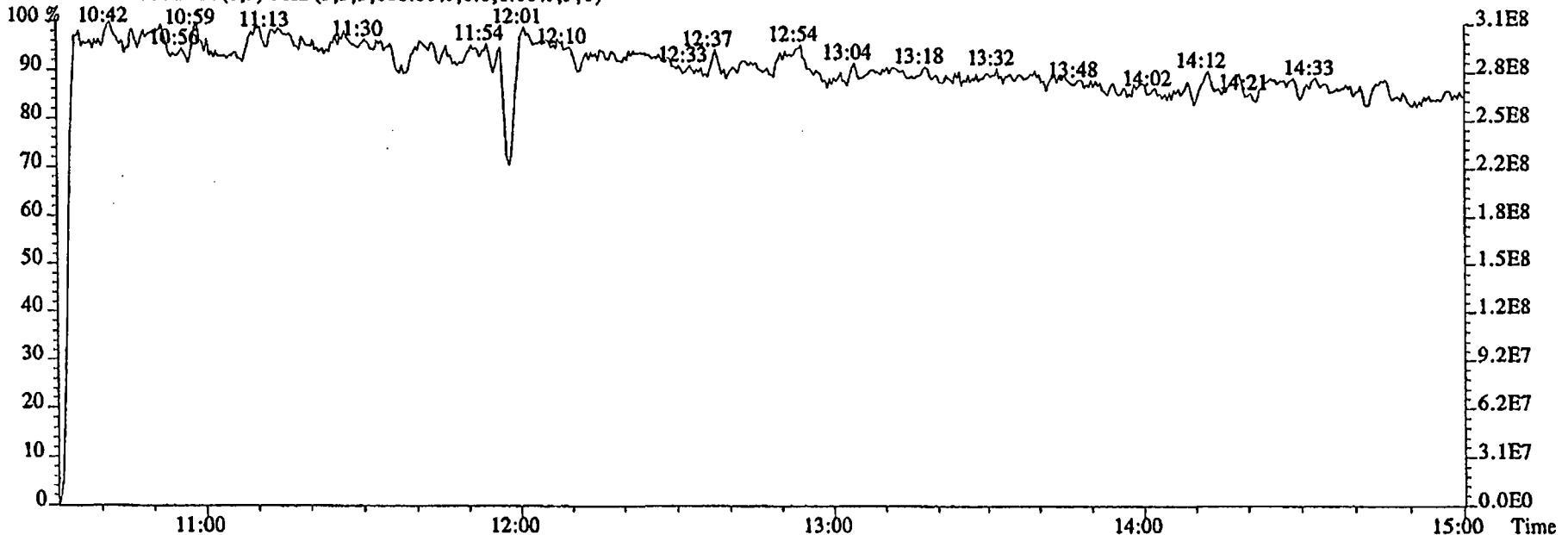
File:08DE045SP #1-626 Acq: 8-DEC-2004 19:39:35 GC EI + Voltage SIR 70SE
Sample#10 Text:G0FX0-1-AAB :G4L040125-1MB Exp:NDMAVOA
113.0032 S:10 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,2289232.0,1.00%,F,T)



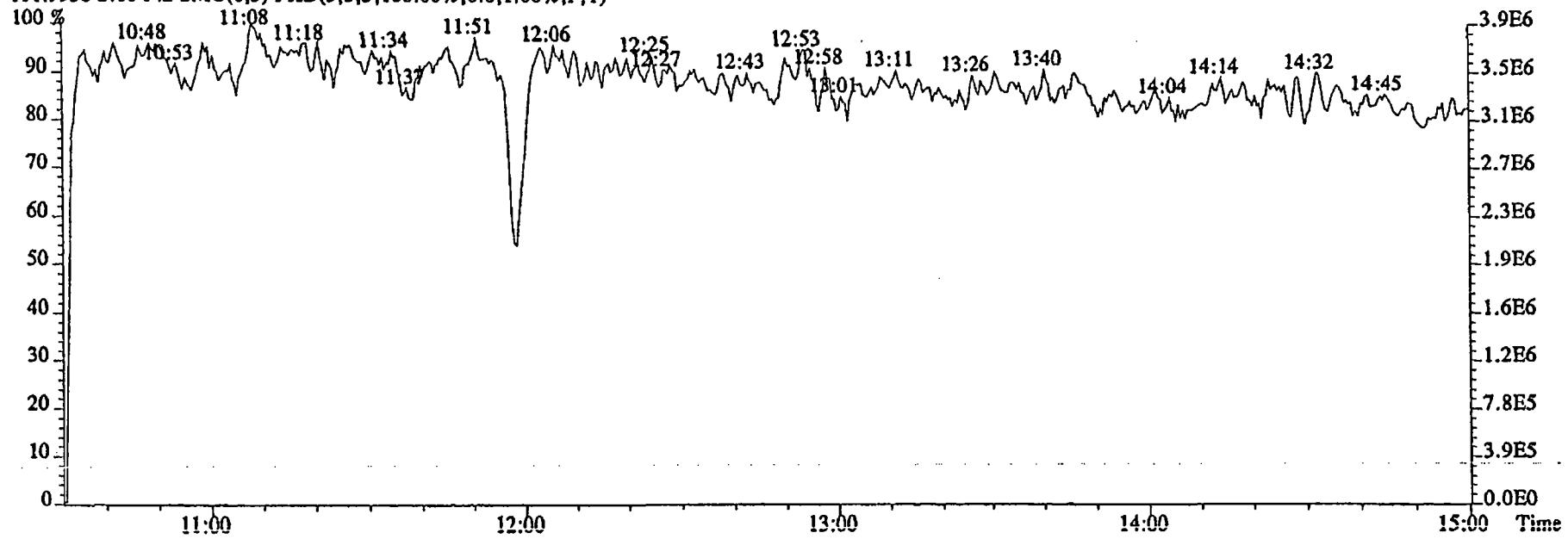
File:08DE045SP #1-462 Acq: 8-DEC-2004 19:39:35 GC EI+ Voltage SIR 70SE
 Sample#10 Text:G0FX0-1-AAB :G4L040125-1MB Exp:NDMAVOA
 68.9952 S:10 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



File:08DE045SP #1-626 Acq: 8-DEC-2004 19:39:35 GC El+ Voltage SIR 70SE
 Sample#10 Text:G0FX0-1-AAB :G4L040125-1MB Exp:NDMAVOA
 118.9920 S:10 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



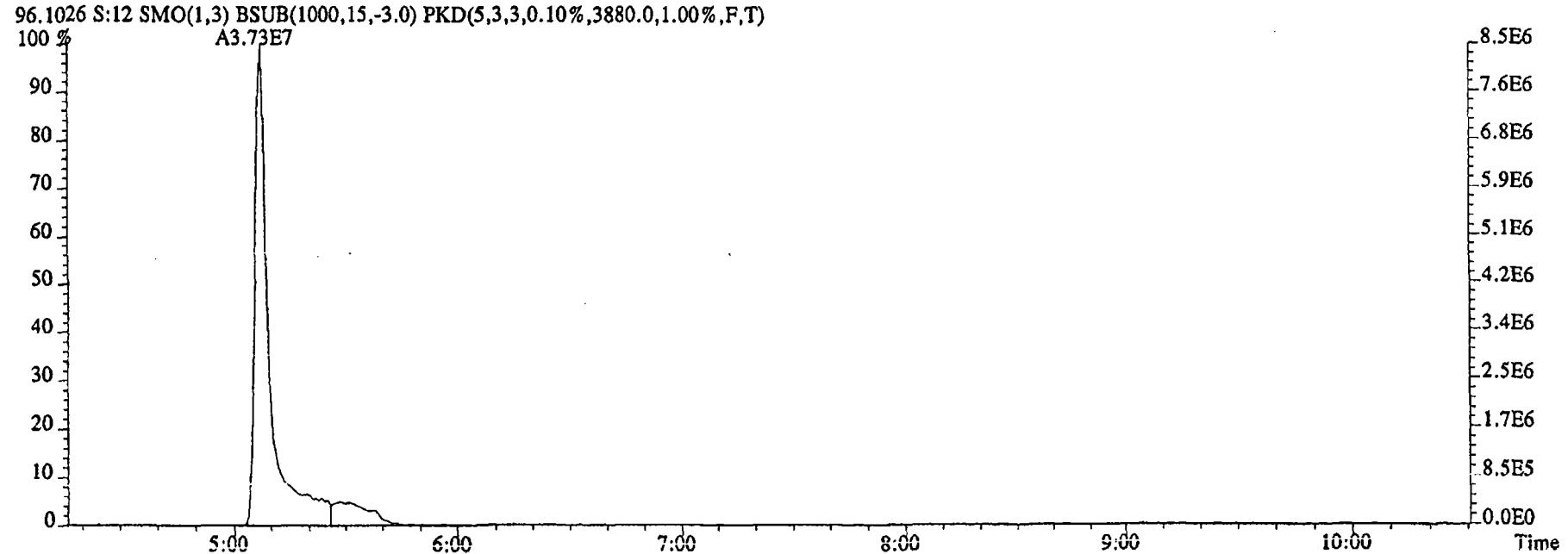
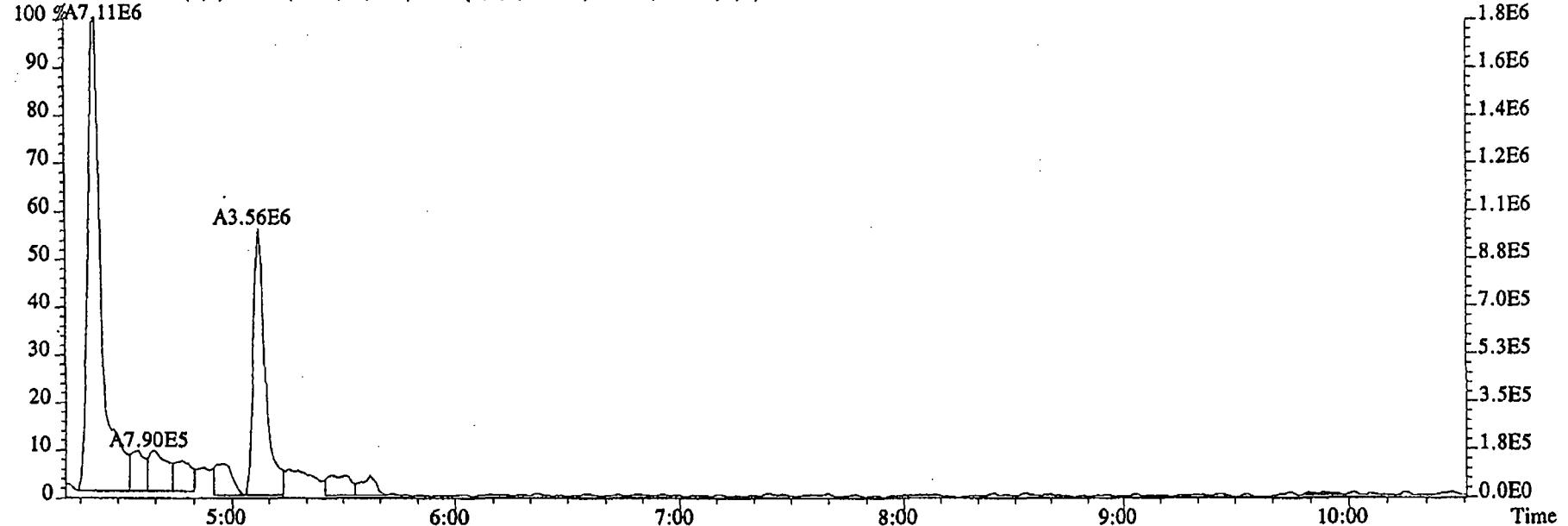
111.9936 S:10 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



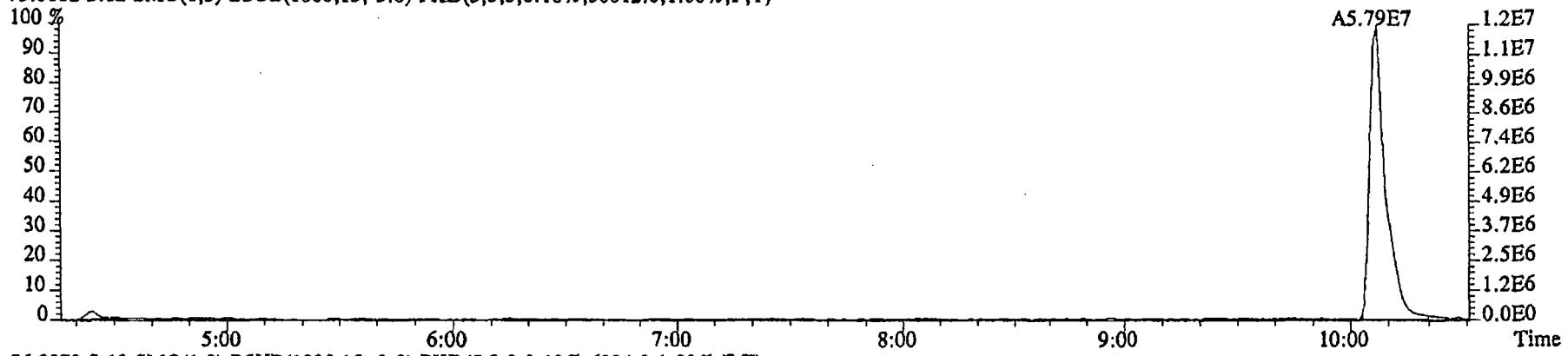
Run text: G0FX0-1-ADL Sample text: G0FX0-1-ADL :G4L040125-1DGS
 Run #9 Filename: 08DE045SP S: 12 I: 1 Results: 08DE045SP1625
 Acquired: 8-DEC-04 20:20:27 Processed: 9-DEC-04 15:10:43
 Run: 08DE045SP Analyte: 1625 Cal: 16251208045SP
 Factor 1: 1.000 Factor 2: 1.000 Sample size: 1.000 L

Name	Resp	RA	RT	RRF	Conc	EDL	Rec	M
2-Chloropyridine	43421200		11:07	-	302.28	-	-	n
D8-1,4-Dioxane	37345600		5:07	0.92	186.06	0.20	18.6	n
1,4-Dioxane	3555740		5:07	1.13	84.63	2.93	-	n
D5-123-TriChloroPropane	38545000		10:03	2.52	70.33	0.10	70.3	n
1,2,3-TriChloroPropane	17445500		10:07	0.50	89.68 ✓	0.46	-	n
1,2,3-TriChloroPropane	57895300		10:07	-	101.38	-	-	n
D6-NDMA	8418580		10:13	1.40	27.67 ✓	0.10	27.7	n
NDMA	12928800		10:13	1.76	87.36 ✓	1.82	-	n
2-Chloropyridine	142118000		11:07	-	299.46	-	-	n

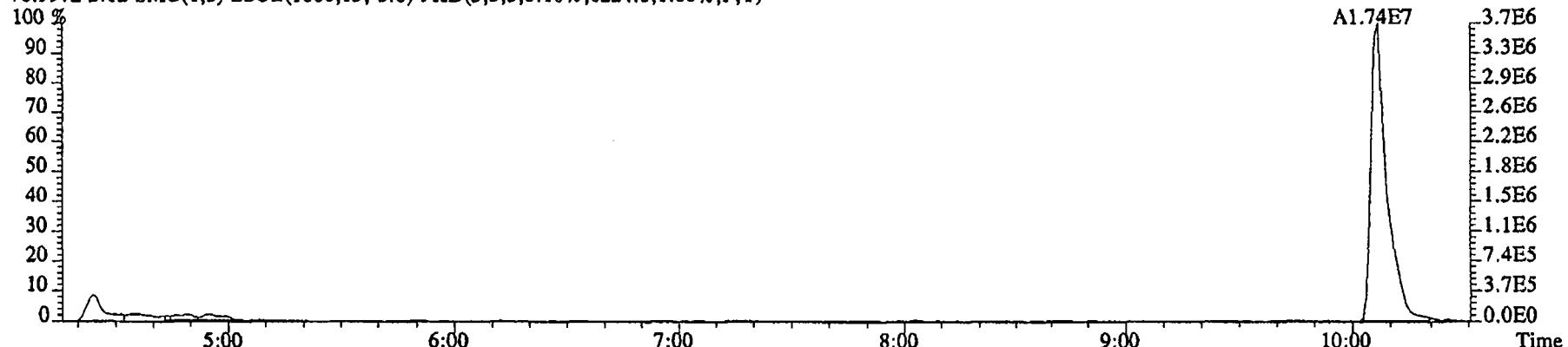
File:08DE045SP #1-462 Acq: 8-DEC-2004 20:20:27 GC EI+ Voltage SIR 70SE
Sample#12 Text:G0FX0-1-ADL :G4L040125-1DCS Exp:NDMAVOA
88.0524 S:12 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,9300.0,1.00%,F,T)



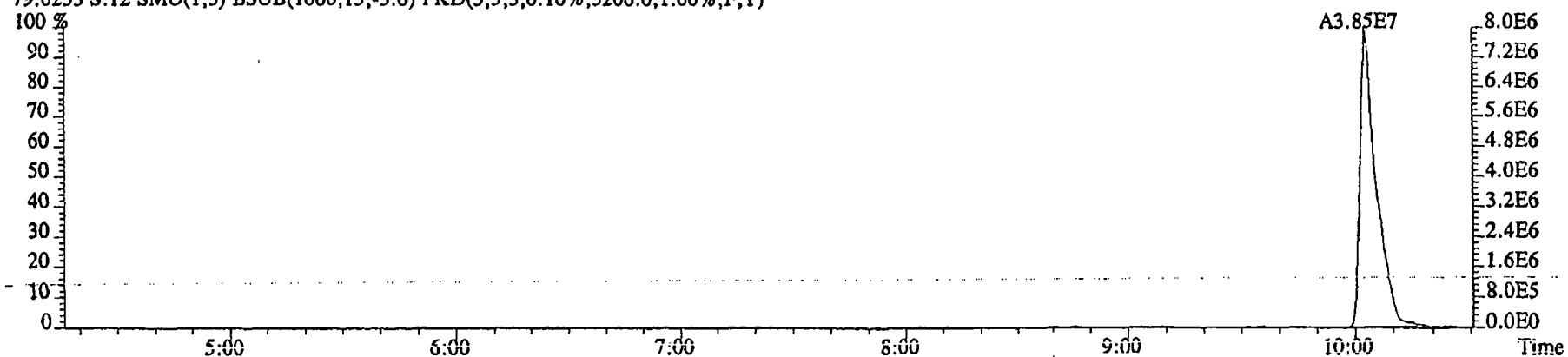
File:08DE045SP #1-462 Acq: 8-DEC-2004 20:20:27 GC EI+ Voltage SIR 70SE
Sample#12 Text:G0FX0-1-ADL :G4L040125-1DCS Exp:NDMAVOA
75.0002 S:12 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,50012.0,1.00%,F,T)



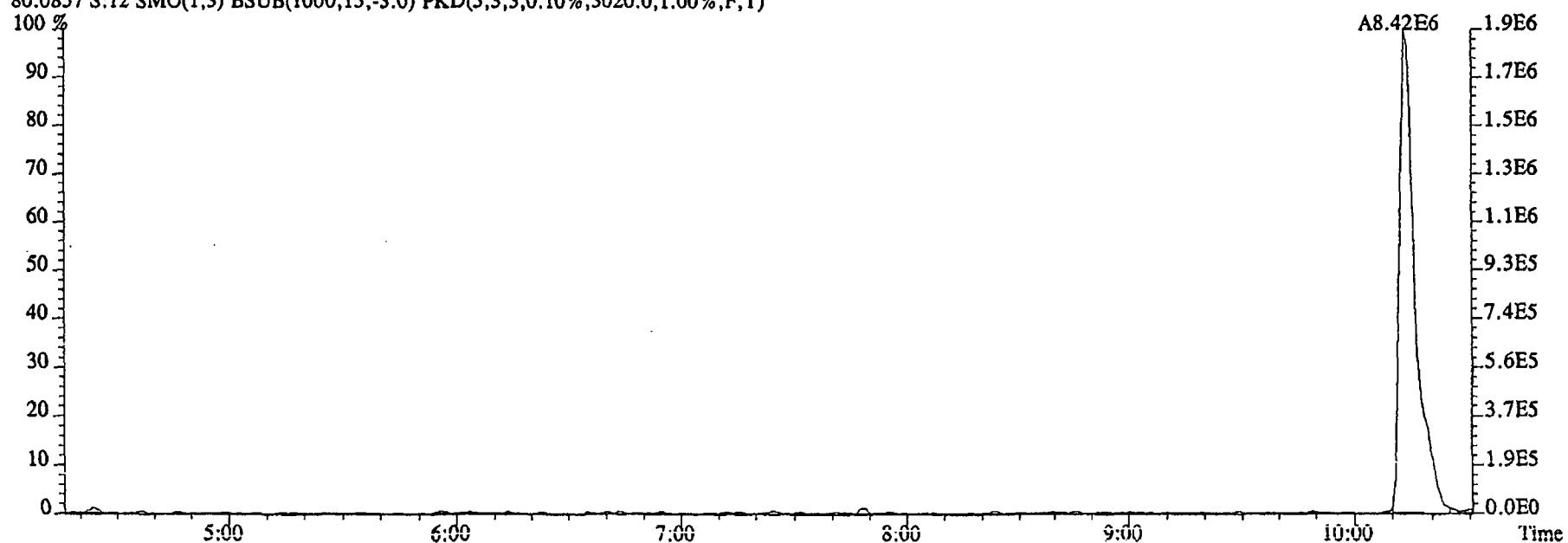
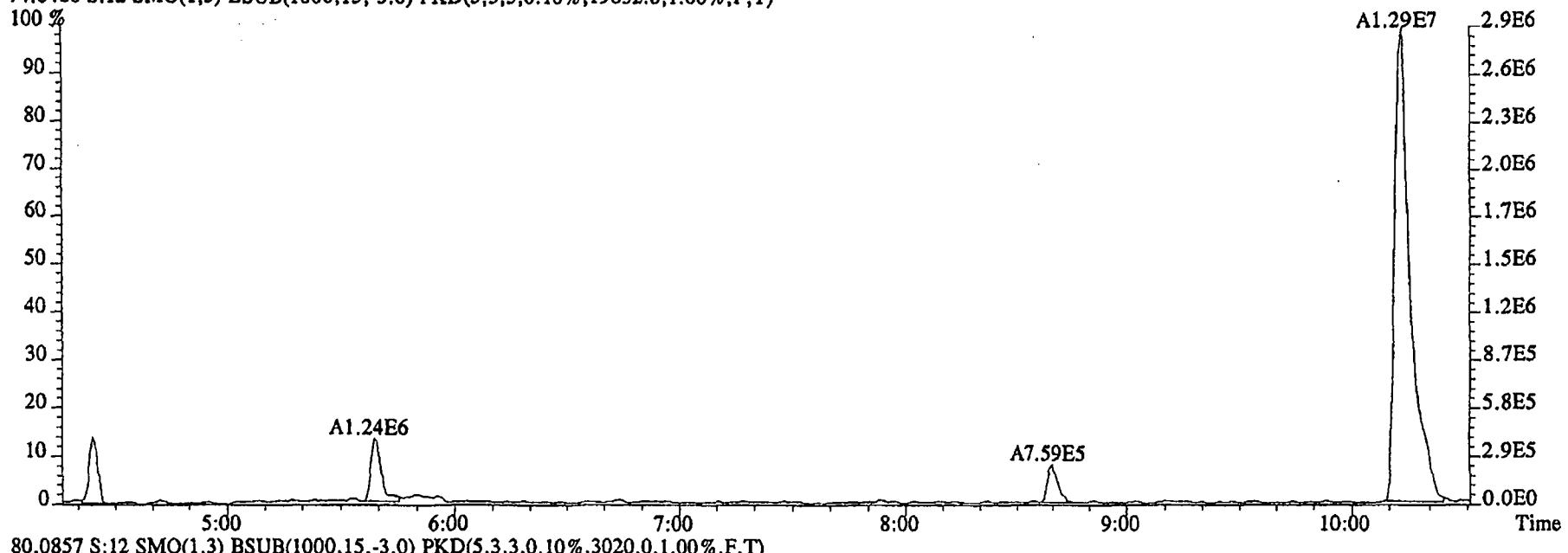
76.9972 S:12 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,6224.0,1.00%,F,T)



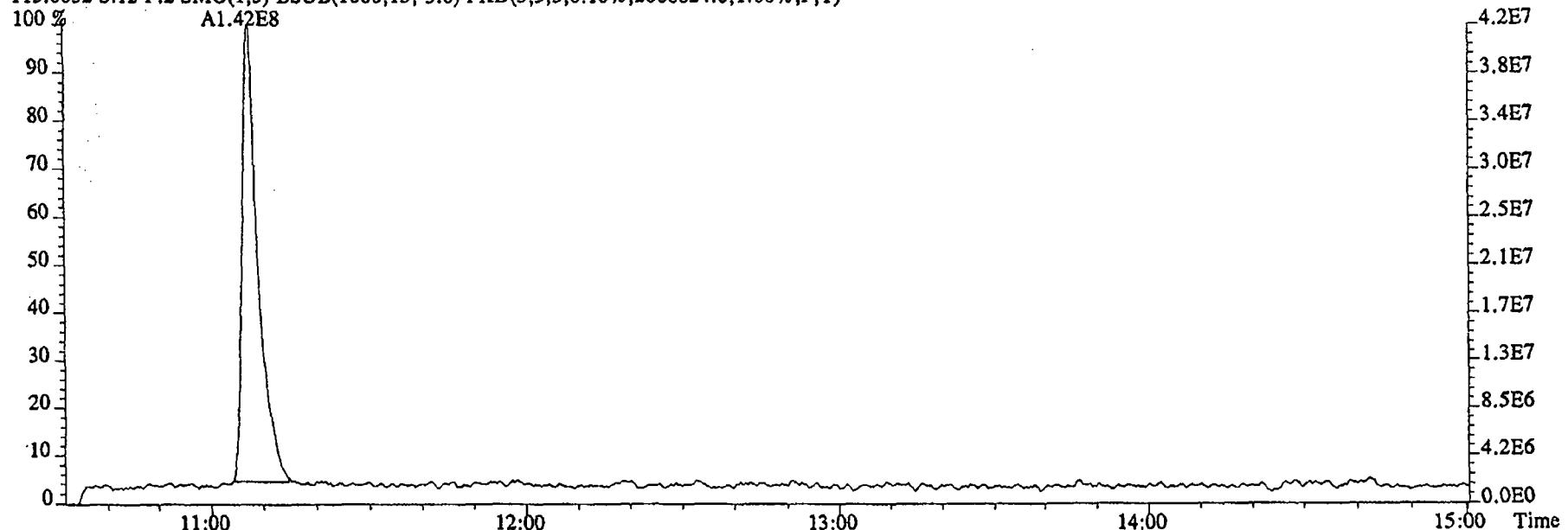
79.0253 S:12 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,5200.0,1.00%,F,T)



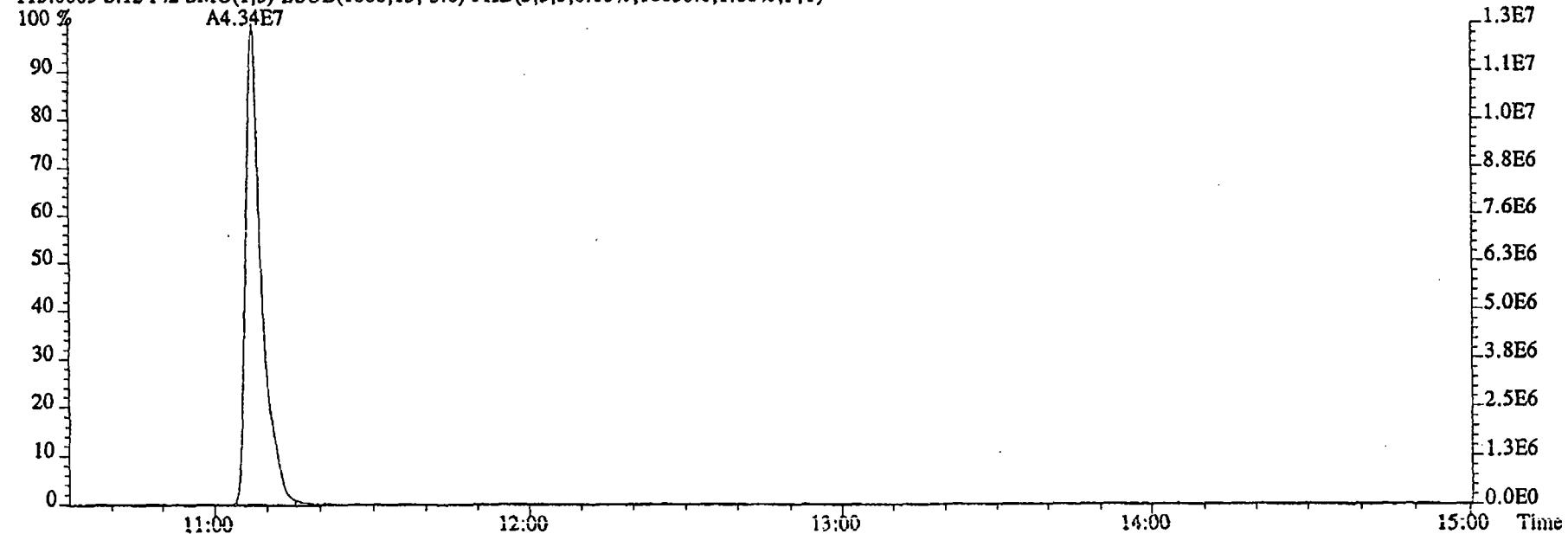
File:08DE045SP #1-462 Acq: 8-DEC-2004 20:20:27 GC El+ Voltage SIR 70SE
 Sample#12 Text:G0FX0-1-ADL :G4L040125-1DCS Exp:NDMAVOA
 74.0480 S:12 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,19832.0,1.00%,F,T)



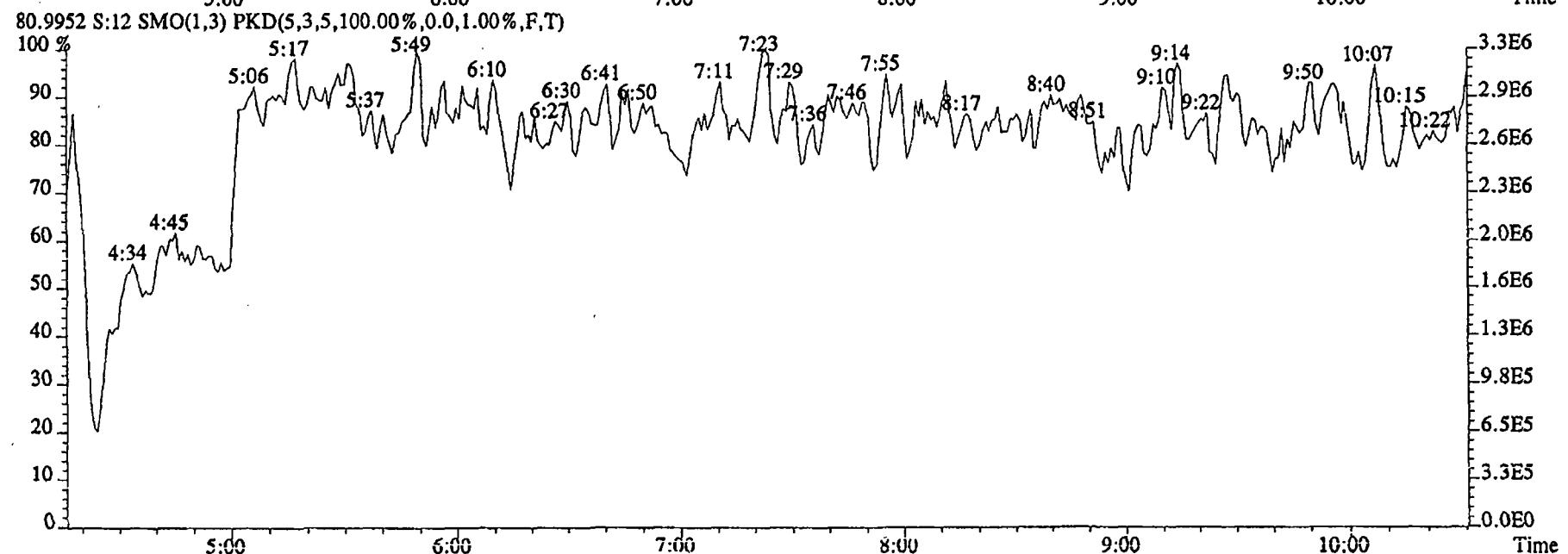
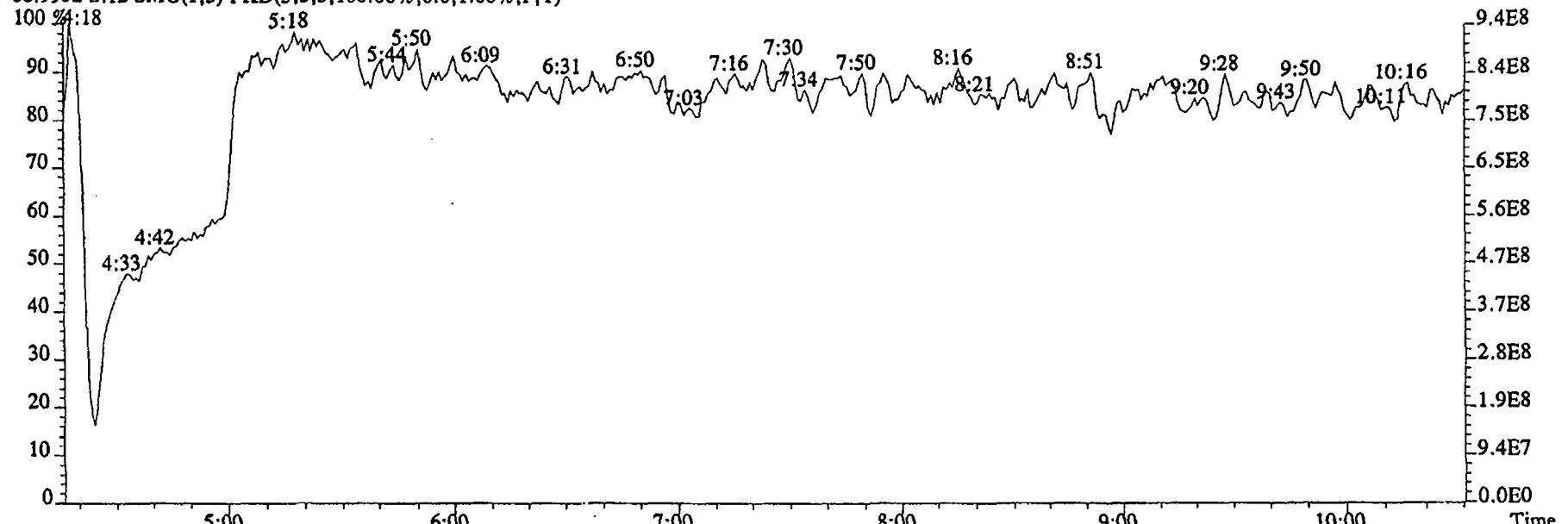
File:08DE045SP #1-626 Acq: 8-DEC-2004 20:20:27 GC EI+ Voltage SIR 70SE
Sample#12 Text:G0FX0-1-ADL :G4L040125-1DCS Exp:NDMAVOA
113.0032 S:12 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,2068624.0,1.00%,F,T)



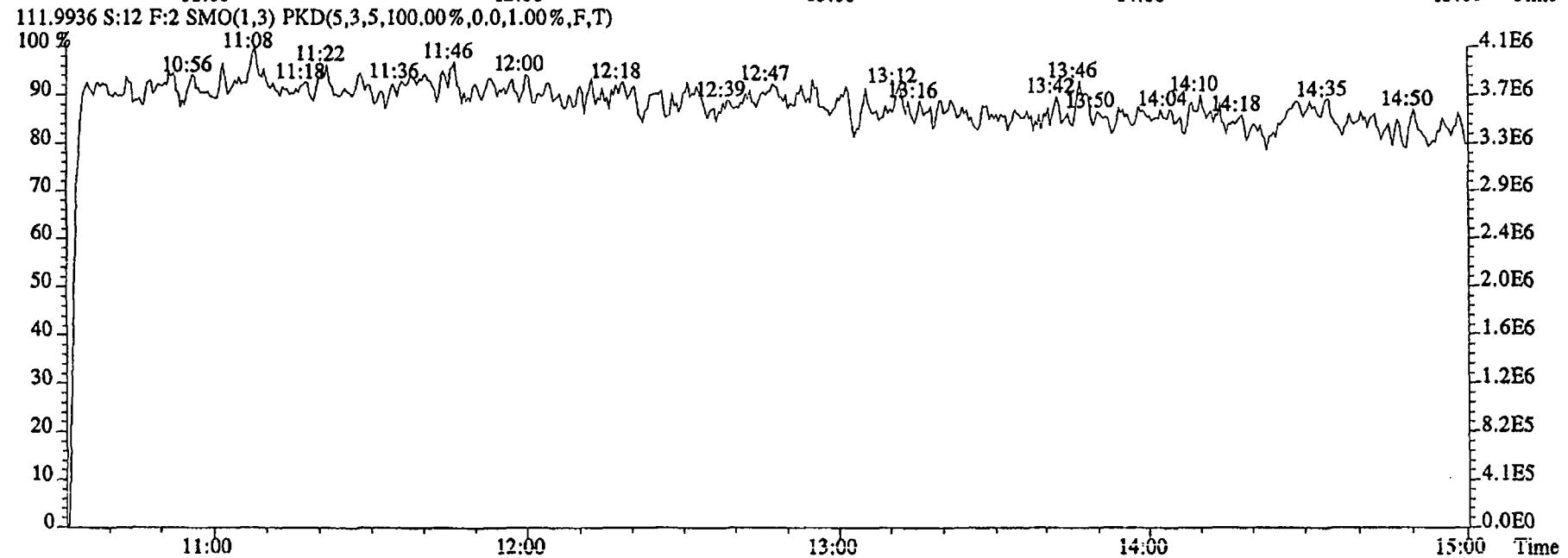
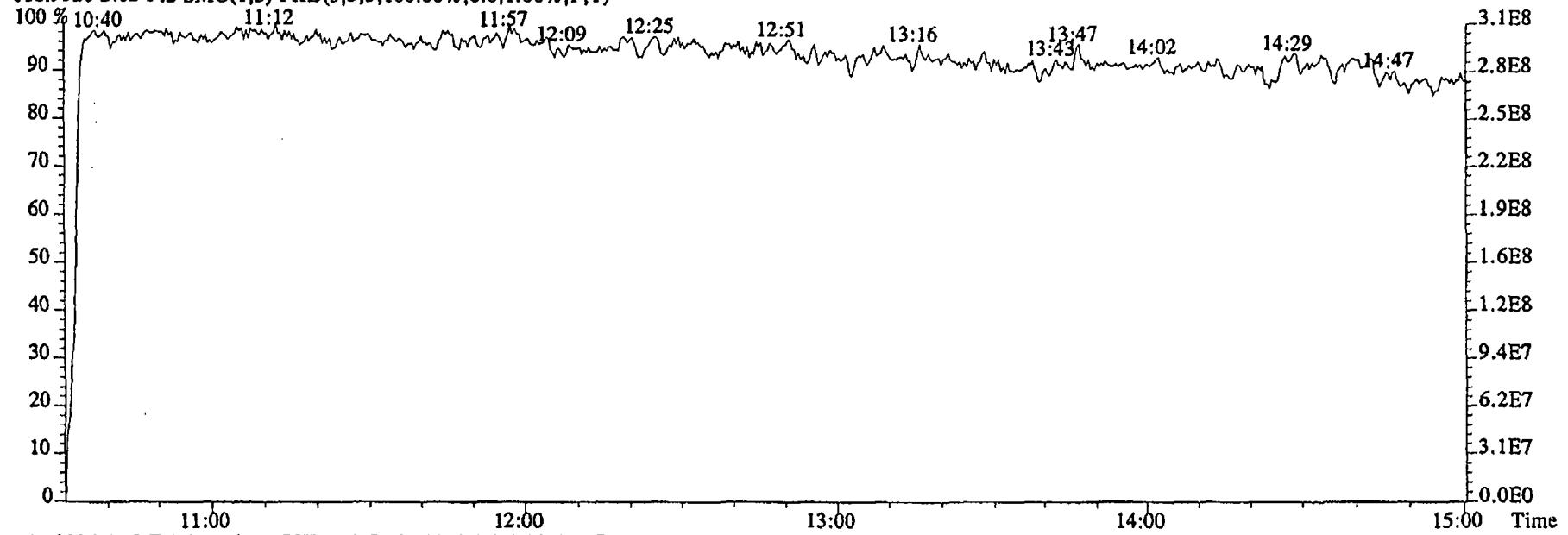
115.0003 S:12 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,16036.0,1.00%,F,T)



File:08DE045SP #1-462 Acq: 8-DEC-2004 20:20:27 GC EI+ Voltage SIR 70SE
 Sample#12 Text:G0FX0-1-ADL :G4L040125-1DCS Exp:NDMAVOA
 68.9952 S:12 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



File:08DE045SP #1-626 Acq: 8-DEC-2004 20:20:27 GC EI+ Voltage SIR 70SE
Sample#12 Text:GOFX0-1-ADL :G4L040125-1DCS Exp:NDMAVOA
118.9920 S:12 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)

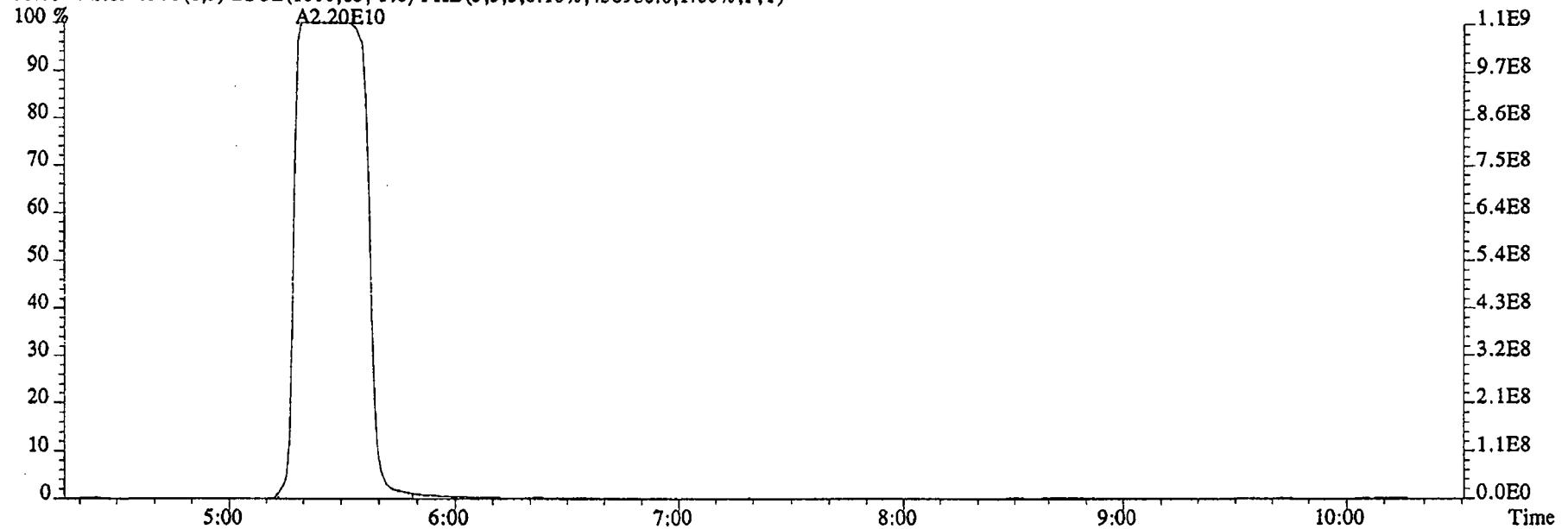


Run text: G0A6L-1-AC Sample text: G0A6L-1-AC :G4L040206-1
 Run #16 Filename: 08DE045SP S: 19 I: 1 Results: 08DE045SP1625
 Acquired: 8-DEC-04 22:43:31 Processed: 9-DEC-04 15:10:45
 Run: 08DE045SP Analyte: 1625 Cal: 16251208045SP
 Factor 1: 1.000 Factor 2: 1.000 Sample size: 0.986 L

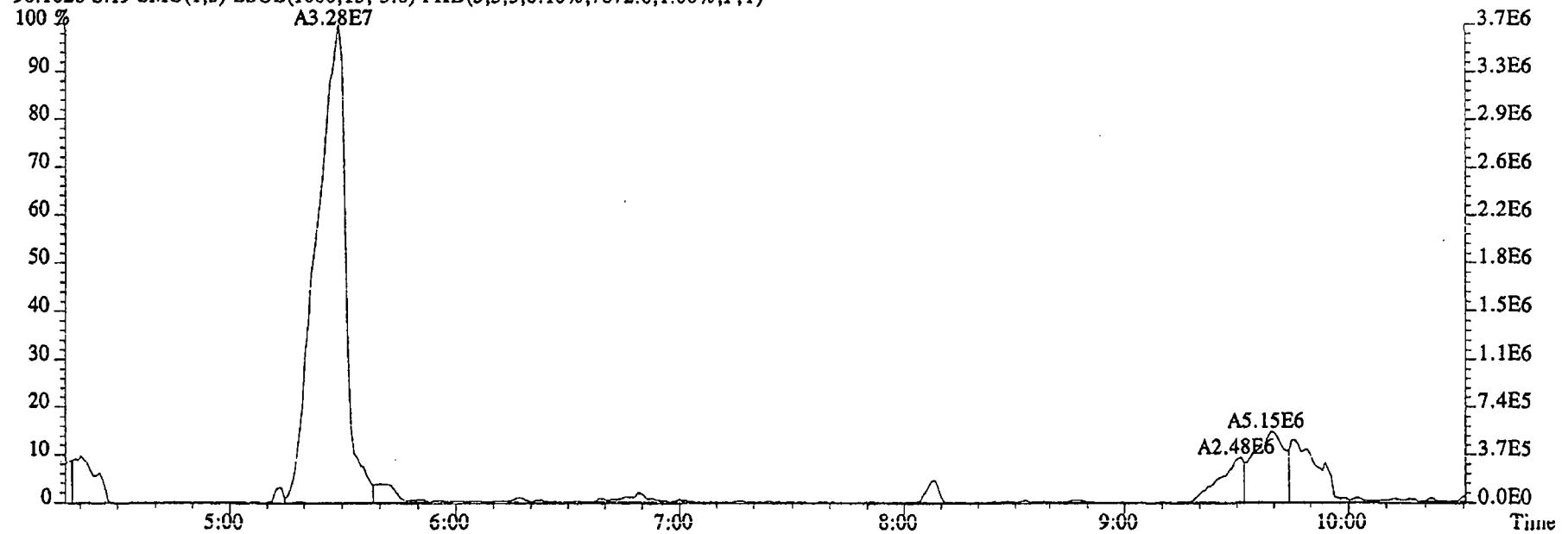
Name	Resp	RA	RT	RRF	Conc	EDL	Rec	M
2-Chloropyridine	82450600		11:13	-	582.14	-	-	n
D8-1,4-Dioxane	*		Not Fnd	0.92	*	0.15	*	n
1,4-Dioxane	*		Not Fnd	1.13	*	*	-	n
D5-123-TriChloroPropane	108229000		10:13	2.52	105.47	0.18	104.0	n
1,2,3-TriChloroPropane	35019100		10:16	0.50	65.03 ✓	1.14	-	n
1,2,3-TriChloroPropane	3119870		10:03	-	5.54	-	-	n
D6-NDMA	13223300		10:25	1.40	23.21	0.11	22.9	n
NDMA	155351000		10:24	1.76	677.81 ✓	6.49	1.97	-
2-Chloropyridine	265426000		11:13	-	567.23	-	300 12/21/04	n

12-16-04
O

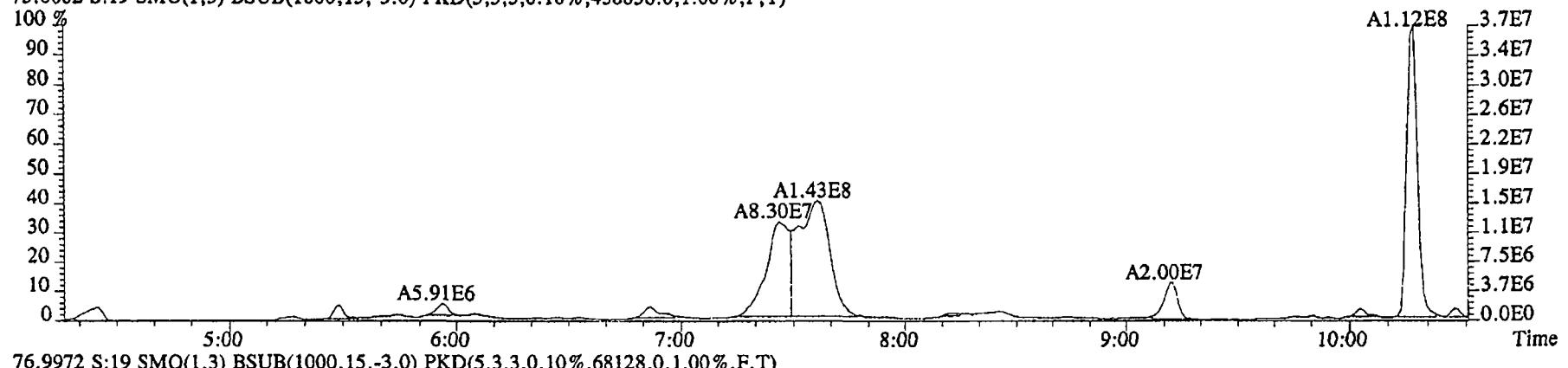
File:08DE045SP #1-462 Acq: 8-DEC-2004 22:43:31 GC EI+ Voltage SIR 70SE
Sample#19 Text:G0A6L-1-AC :G4L040206-1 Exp:NDMAVOA
88.0524 S:19 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,456980.0,1.00%,F,T)



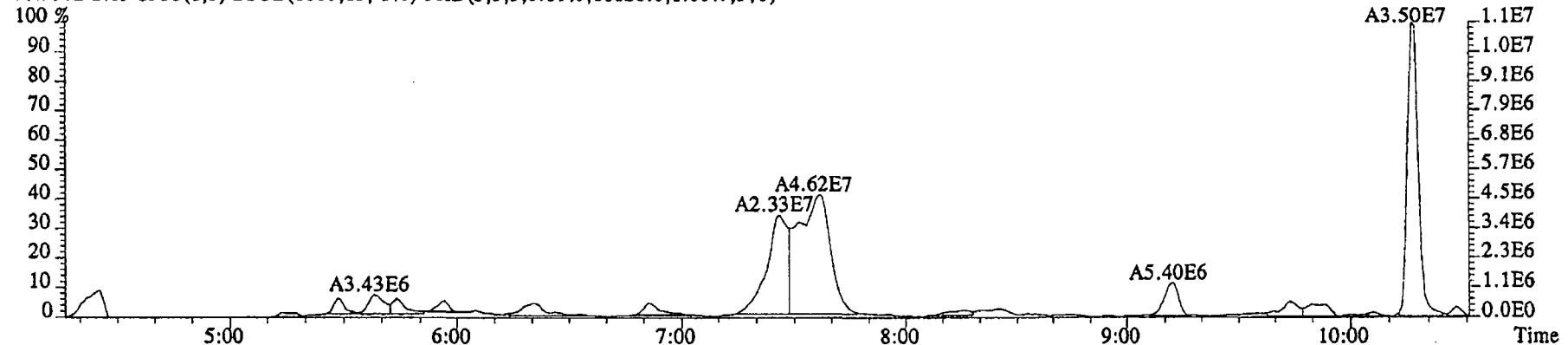
96.1026 S:19 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,7672.0,1.00%,F,T)



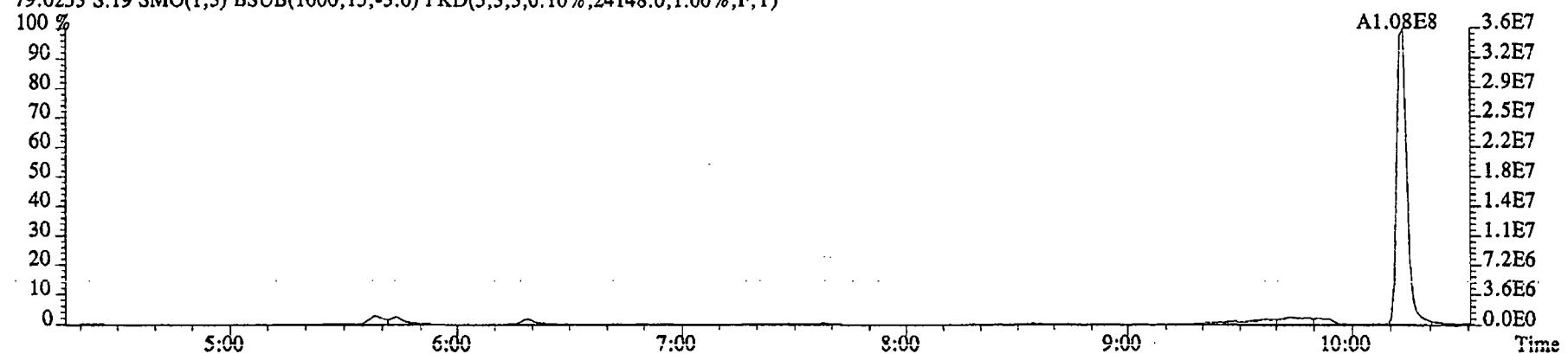
File:08DE045SP #1-462 Acq: 8-DEC-2004 22:43:31 GC EI+ Voltage SIR 70SE
 Sample#19 Text:G0A6L-1-AC :G4L040206-1 Exp:NDMAVOA
 75.0002 S:19 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,436636.0,1.00%,F,T)



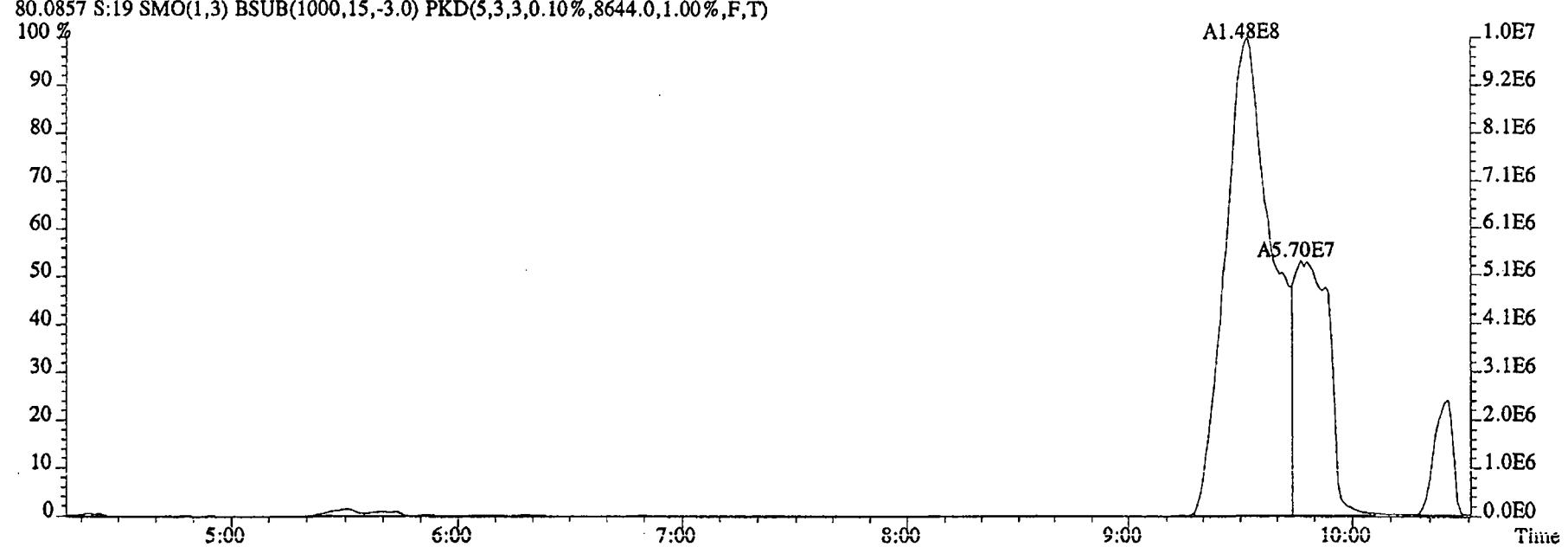
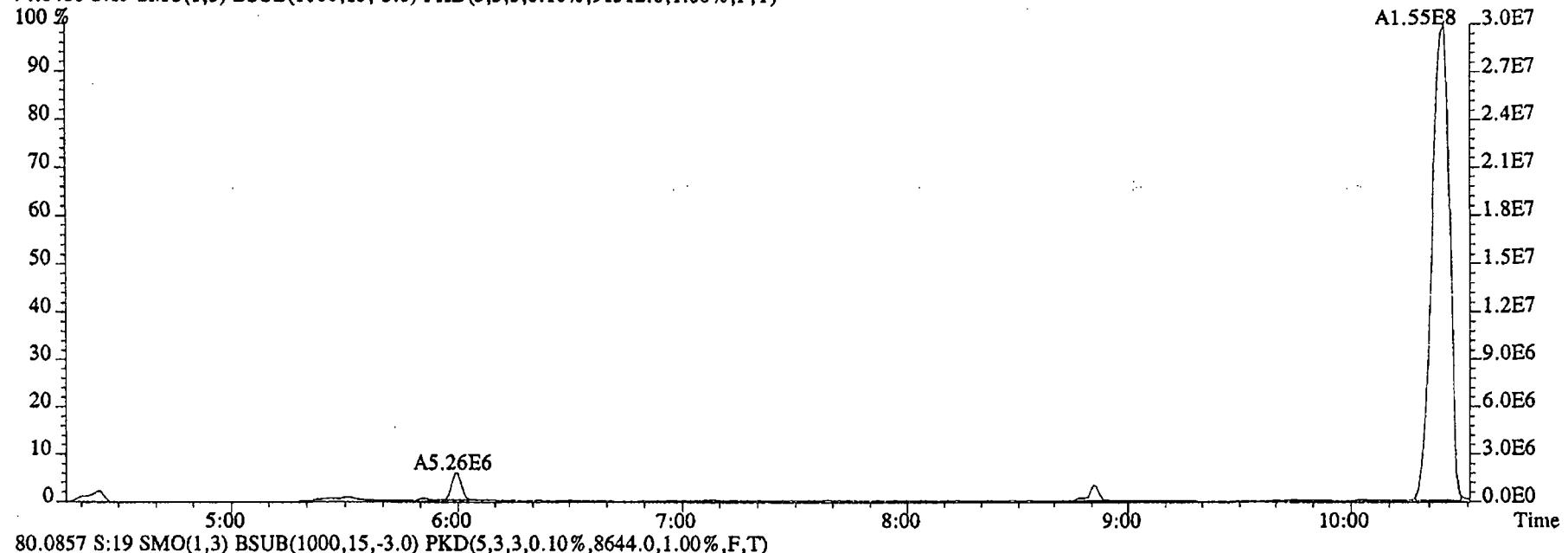
76.9972 S:19 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,68128.0,1.00%,F,T)



79.0253 S:19 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,24148.0,1.00%,F,T)

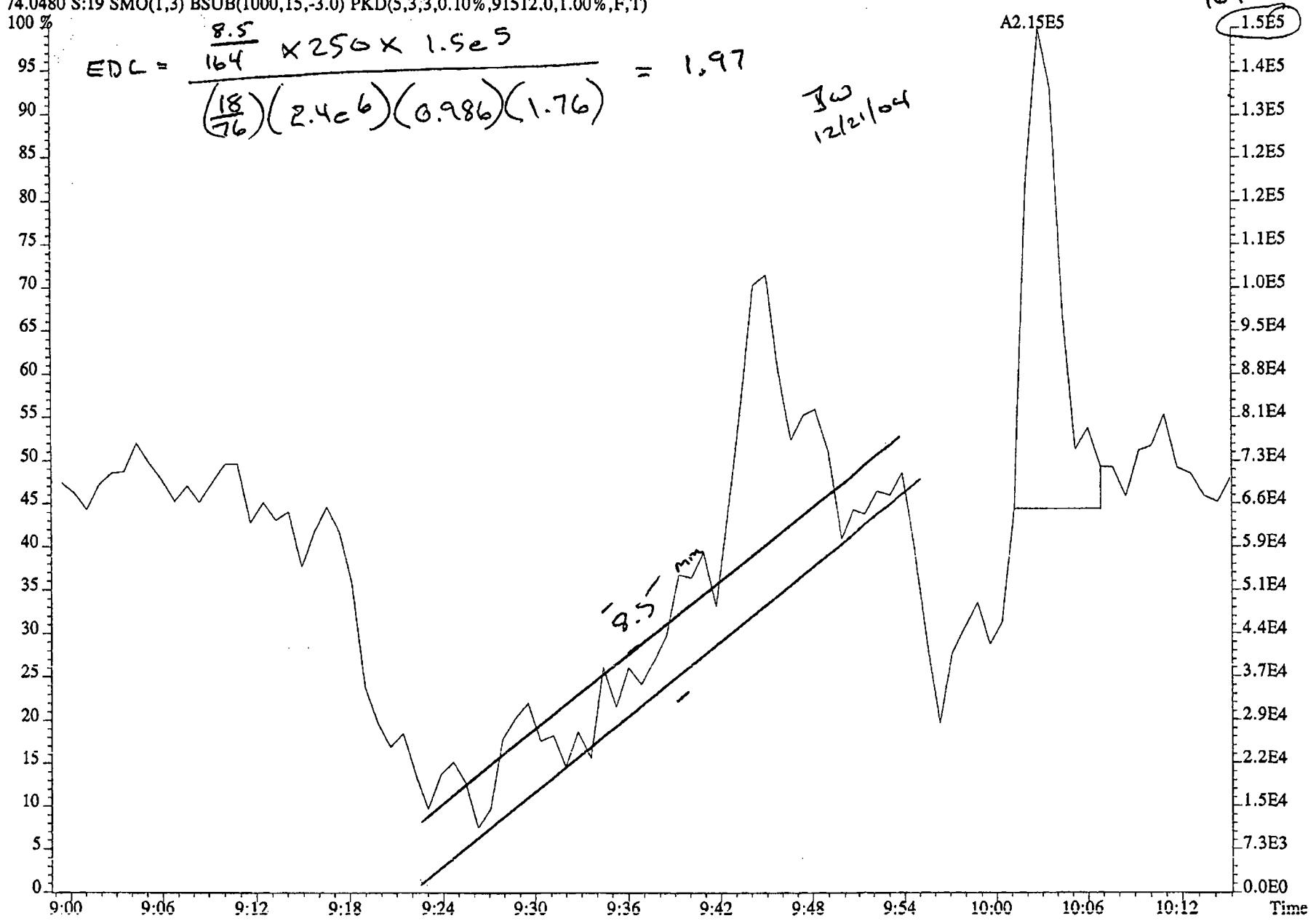


File:08DE045SP #1-462 Acq: 8-DEC-2004 22:43:31 GC EI+ Voltage SIR 70SE
Sample#19 Text:G0A6L-1-AC :G4L040206-1 Exp:NDMAVOA
74.0480 S:19 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,91512.0,1.00%,F,T)

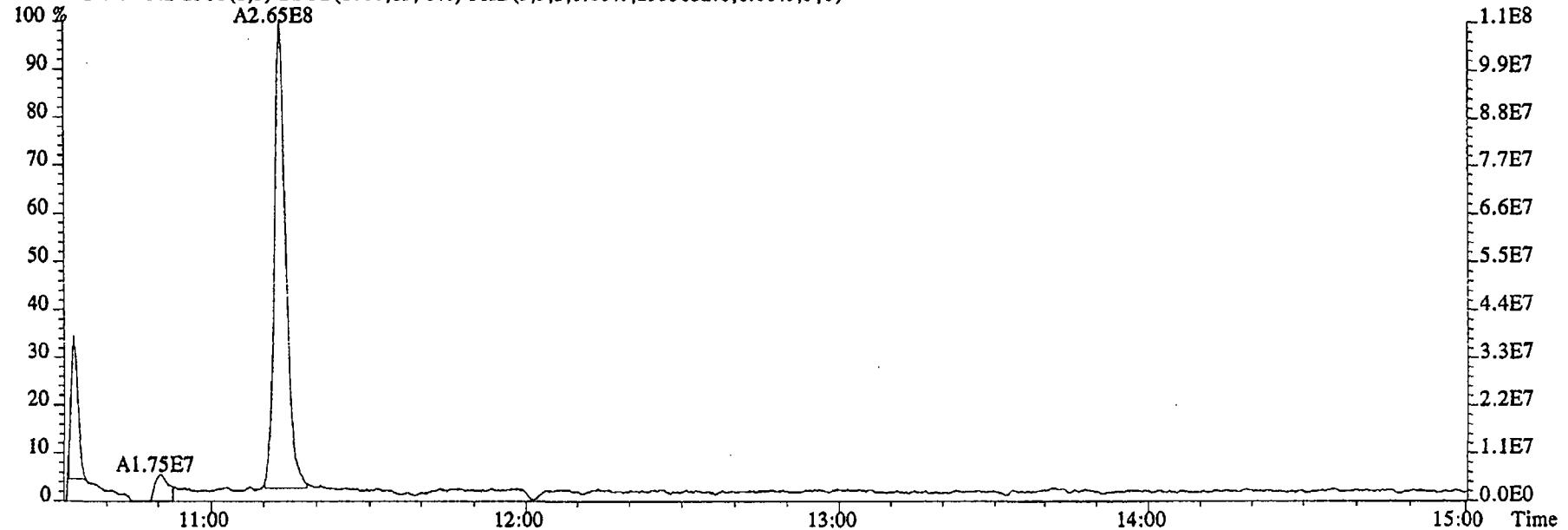


File:08DE045SP #1-462 Acq: 8-DEC-2004 22:43:31 GC EI+ Voltage SIR 70SE
 Sample#19 Text:G0A6L-1-AC :G4L040206-1 Exp:NDMAVOA
 74.0480 S:19 SMO(1,3) BSUB(1000,15,-3.0) PKD(S,3,3,0.10%,91512.0,1.00%,F,T)

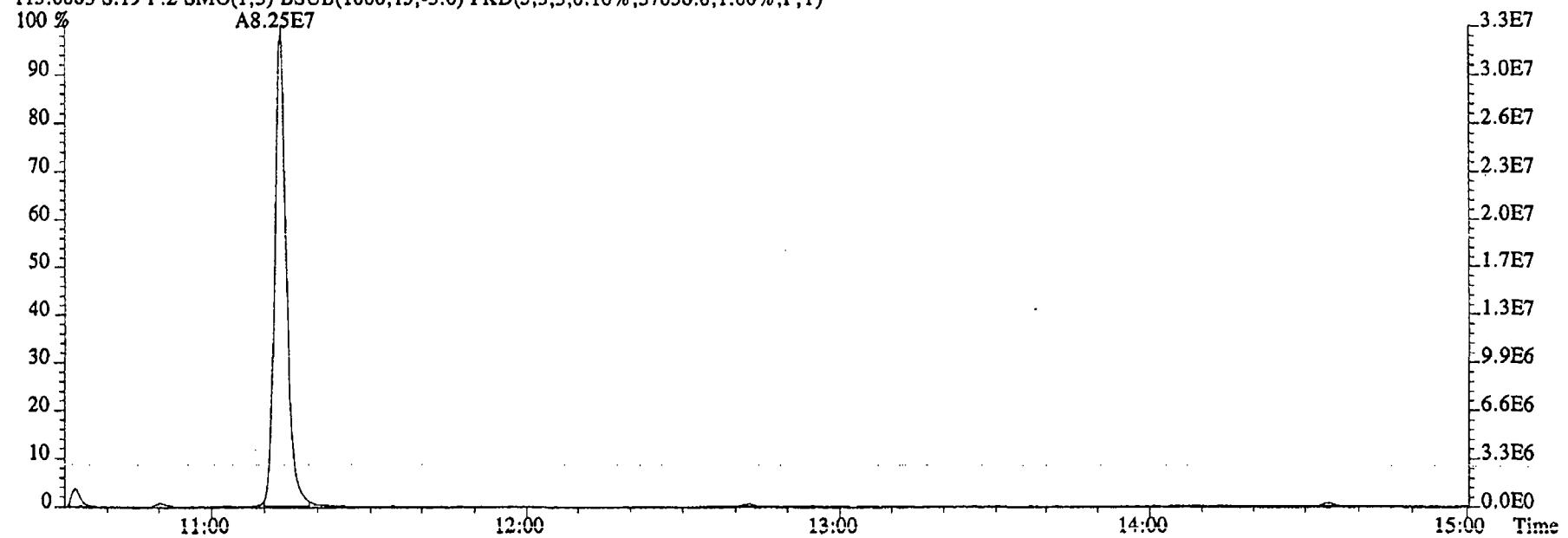
$$EDC = \frac{\frac{8.5}{164} \times 250 \times 1.5 \times 10^5}{\left(\frac{18}{76}\right)(2.4 \times 10^{-6})(0.986)(1.76)} = 1.97$$



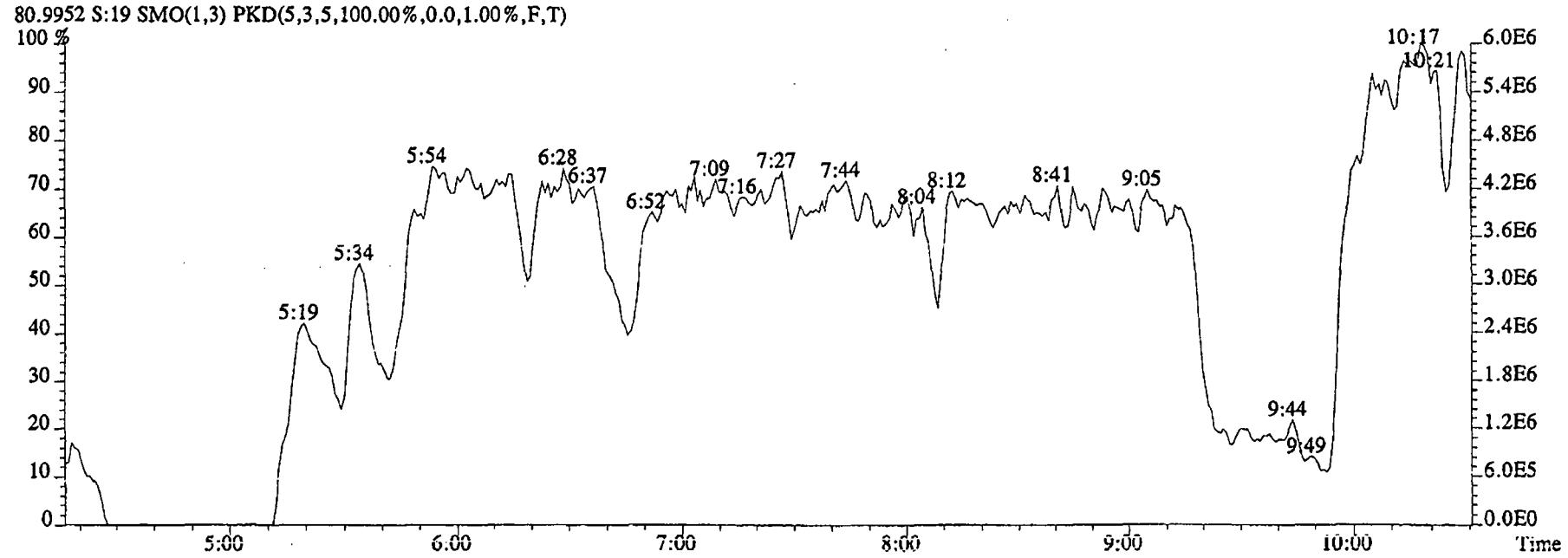
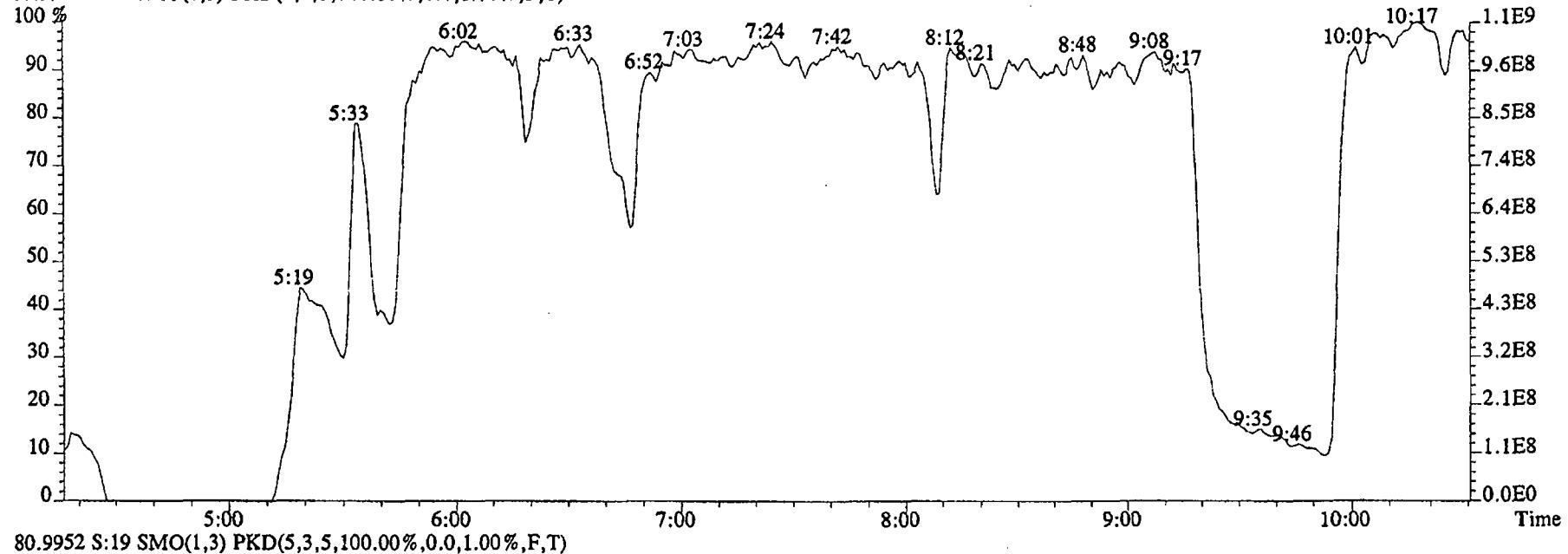
File:08DE045SP #1-626 Acq: 8-DEC-2004 22:43:31 GC El+ Voltage SIR 70SE
Sample#19 Text:G0A6L-1-AC :G4L040206-1 Exp:NDMAVOA
113.0032 S:19 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,2933032.0,1.00%,F,T)



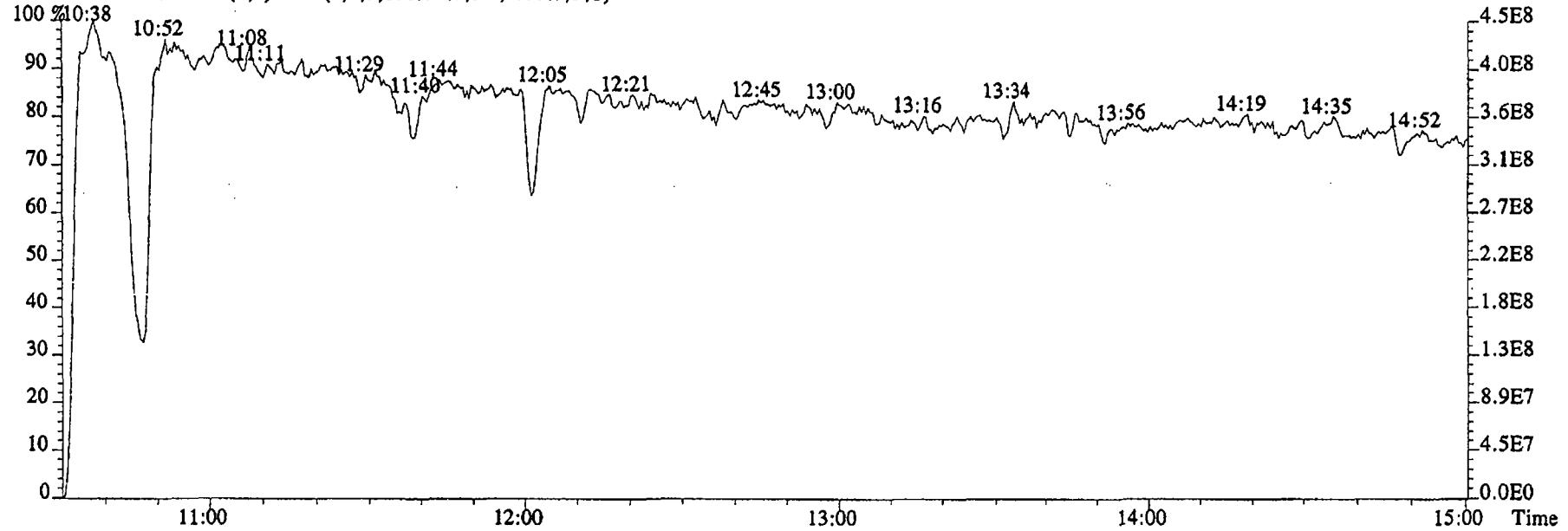
115.0003 S:19 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,37056.0,1.00%,F,T)



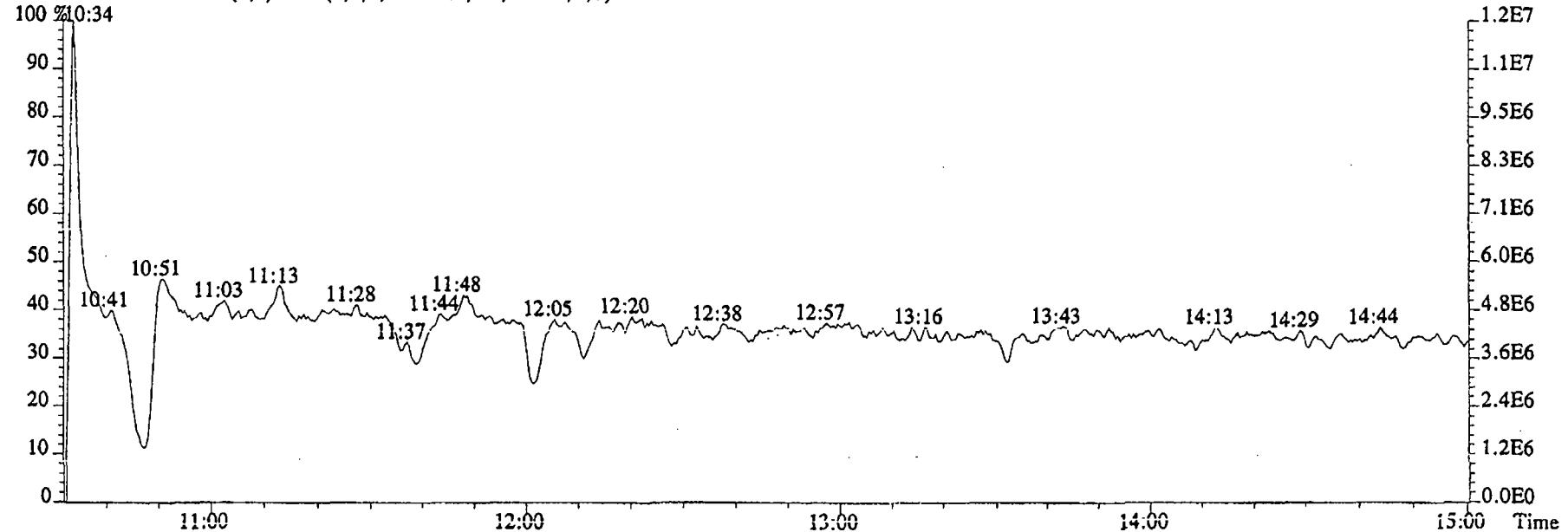
File:08DE045SP #1-462 Acq: 8-DEC-2004 22:43:31 GC El+ Voltage SIR 70SE
 Sample#19 Text:G0A6L-1-AC :G4LD040206-1 Exp:NDMAVOA
 68.9952 S:19 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



File:08DE045SP #1-626 Acq: 8-DEC-2004 22:43:31 GC EI+ Voltage SIR 70SE
Sample#19 Text:G0A6L-1-AC :G4L040206-1 Exp:NDMAVOA
118.9920 S:19 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



111.9936 S:19 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



Daily Standard Checklist
High Resolution

Method ID K-25
 Column ID SP-2331
 STD ID ST1208F
 Analyzed By AM
 Prepared By KAS
 Reviewed By C. Pichell

Associated ICAL K-25/1208045SP
 Instrument ID 5SP
 STD Solution 2350-6TC
 Date Analyzed 12/8/04
 Date Prepared 12/13/04
 Date Reviewed 12-14-04

ANALYSIS OF CCAT		INITIATED	REVIEWED
Standard, CPSM, and Solvent Blank present?	/		
Copy of log-file and Static Resolution present?	/	/	
CPSM blow up present?	N/A		N/A
Curve Summary present?	/		/
Summary of Method criteria present?	N/A		N/A
Daily standard within method specified limits?	/		/
Analyte retention times correct?	/		/
Isotopic ratios within limits?	N/A		N/A
CPSM valley ≤ method specified limits?**	N/A		N/A
Are chromatographic windows correct?	/		/
Samples analyzed within 12 hrs of daily standard?	/		/
Manual reintegration's checked and hardcopies included?	N/A		N/A
Ending Standard and ending Static Resolutions present	No		N/A

COMMENTS:

* Method 8290: (beginning) +/- 20% from curve RRFs for native analytes, +/- 30% from curve RRFs for labeled compounds.
 Method 8290: (ending) +/- 25% from curve RRFs for native analytes, +/- 35% from curve RRFs for labeled compounds.

Method 8290 (GB): +/- 30% from curve RRFs for native analytes.

Method 23: See Method 23 Daily Standard Criteria, Table 5.

Method 1613A/1613B: See Method 1613A, Method 1613B or Method 1613B Tetras Daily Standard Criteria,
 PAH: +/- 30% from curve RRFs for native and labeled compounds.

PCB: +/- 30% from curve RRFs for native and 50% for labeled compounds.

NCASI 551: +/-20% from curve RRFs for native and labeled compounds.

DBD/DBF: +/-30% from curve RRFs for native analytes; +/- 40% from curve RRFs for labeled compounds.

** Method 23 CPSM Criteria: 25% valley between 2378 TCDF (DB-225)/TCDD (DB-5) and the closest eluters normalized at the smallest peak height of the three peaks (with the 2378 peak being the middle peak).

551/1613A/1613B/8290 CPSM Criteria: 25% valley between 2378 TCDF (DB-225)/TCDD (DB-5) and its closest eluters normalized to the 2378 peak.

GB CPSM Criteria: 30% valley between 2378 TCDF (DB-225)/TCDD (DB-5) and its closest eluters normalized to the 2378 peak.

Run text: ST1208F
 Run #6 Filename 08DE045SP S: 8
 Acquired: 8-DEC-04 18:58:44
 Run: 08DE045SP Analyte: 1625

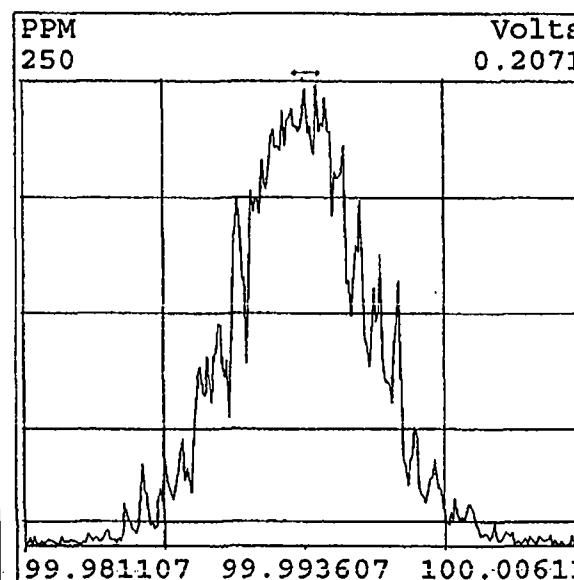
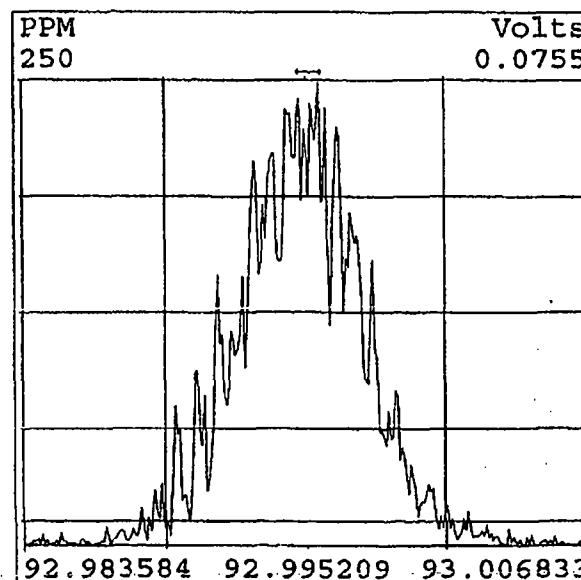
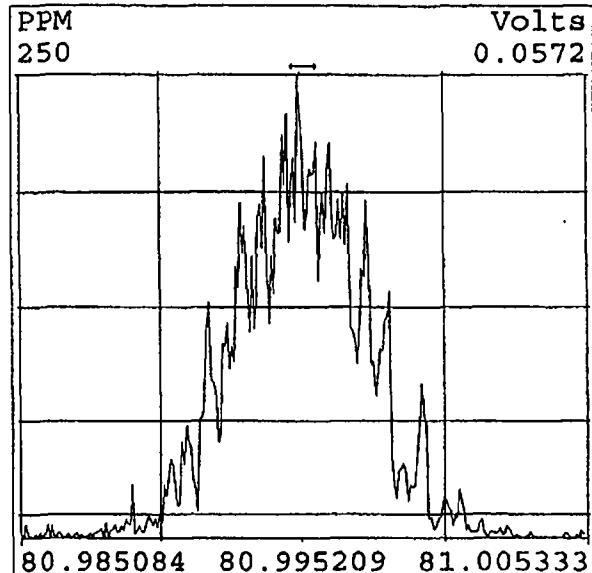
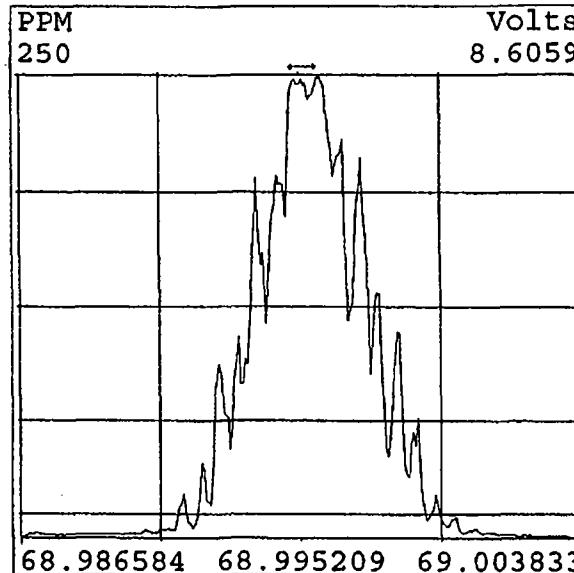
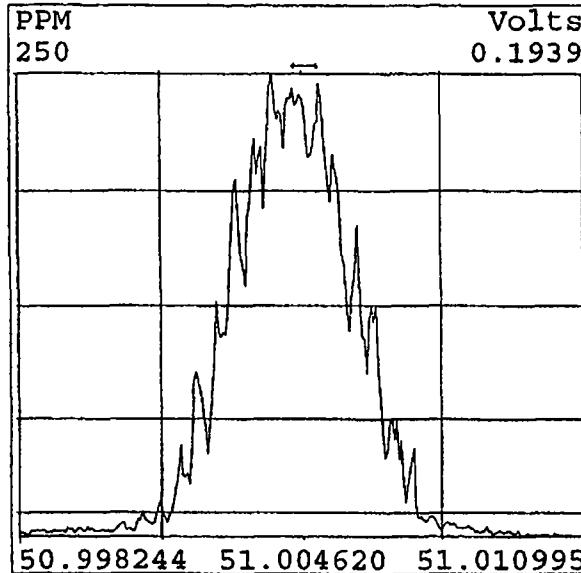
File text: ST1208F :CS3 2350-68C
 I: 1
 Processed: 8-DEC-04 19:18:14
 Cal: 16251208045SP Results: 08DE045SP1625

Name	Resp	RA	RT	RRF	Amount	Dev'n	Mod?
2-Chloropyridine	16308900		11:07	-	200.00	-	n
D8-1,4-Dioxane	73737500		5:07	0.90	1000.00	-2.2	n
1,4-Dioxane	3876880		5:07	1.05	50.00	-6.5	n
D5-123-TriChloroPropane	19201600		10:03	2.35	100.00	-6.7	n
1,2,3-TriChloroPropane	4900220		10:07	0.51	50.00	1.1	n
1,2,3-TriChloroPropane	16298200		10:07	-	50.00	-	n
D6-NDMA	11665000		10:13	1.43	100.00	2.1	n
NDMA	9789070		10:13	1.68	50.00	-4.5	n
2-Chloropyridine	51000800		11:07	-	200.00	-	n

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
08DE045SP	1	ST1208	CS1 2350-68A				1.000	
08DE045SP	2	ST1208A	CS2 2350-68B				1.000	
08DE045SP	3	ST1208B	CS3 2350-68C				1.000	
08DE045SP	4	ST1208C	CS3 2350-68C				1.000	
08DE045SP	5	ST1208D	CS4 2350-68D				1.000	
08DE045SP	6	ST1208E	CS5 2350-68E				1.000	
08DE045SP	7	SB1208	Solvent Blank DCM				1.000	
08DE045SP	8	ST1208F	CS3 2350-68C				1.000	
08DE045SP	9	SB1208A	Solvent Blank DCM				1.000	
08DE045SP	10	G0FX0-1-AAB	G4L040125-1MB	500	1625/WATER	VS52	1.000	L
08DE045SP	11	G0FX0-1-ACC	G4L040125-1LCS	500	1625/WATER		1.000	L
08DE045SP	12	G0FX0-1-ADL	G4L040125-1DCS	500	1625/WATER		1.000	L
08DE045SP	13	G0AGN-1-AC	G4L040125-1	500	1625/WATER		0.996	L
08DE045SP	14	G0AGR-1-AC	G4L040125-2	500	1625/WATER		0.979	L
08DE045SP	15	G0AGV-1-AC	G4L040125-3	500	1625/WATER		0.973	L
08DE045SP	16	G0AVX-1-AC	G4L040125-4	500	1625/WATER		0.972	L
08DE045SP	17	G0A8Q-1-AE	G4L040211-30	500	1625/WATER		0.970	L
08DE045SP	18	GX97M-1-AA	G4L030417-1	500	1625/WATER		0.969	L
08DE045SP	19	G0A6L-1-AC	G4L040206-1	500	1625/WATER		0.986	L
08DE045SP	20	SB1208B	Solvent Blank DCM				1.000	
08DE045SP	21	ST1208G	CS3 2350-68C				1.000	
08DE045SP	22						1.000	
08DE045SP	23						1.000	
08DE045SP	24						1.000	
08DE045SP	25						1.000	
08DE045SP	26						1.000	
08DE045SP	27						1.000	
08DE045SP	28						1.000	
08DE045SP	29						1.000	
08DE045SP	30		AM 12-08-04				1.000	
08DE045SP	31						1.000	

Reviewed by Ag
12/9/04

Peak Locate Examination: 8-DEC-2004:16:29 File:08DE045SP
Experiment:NDMAVOA Function:1 Reference:PFK



Page 1 of 1

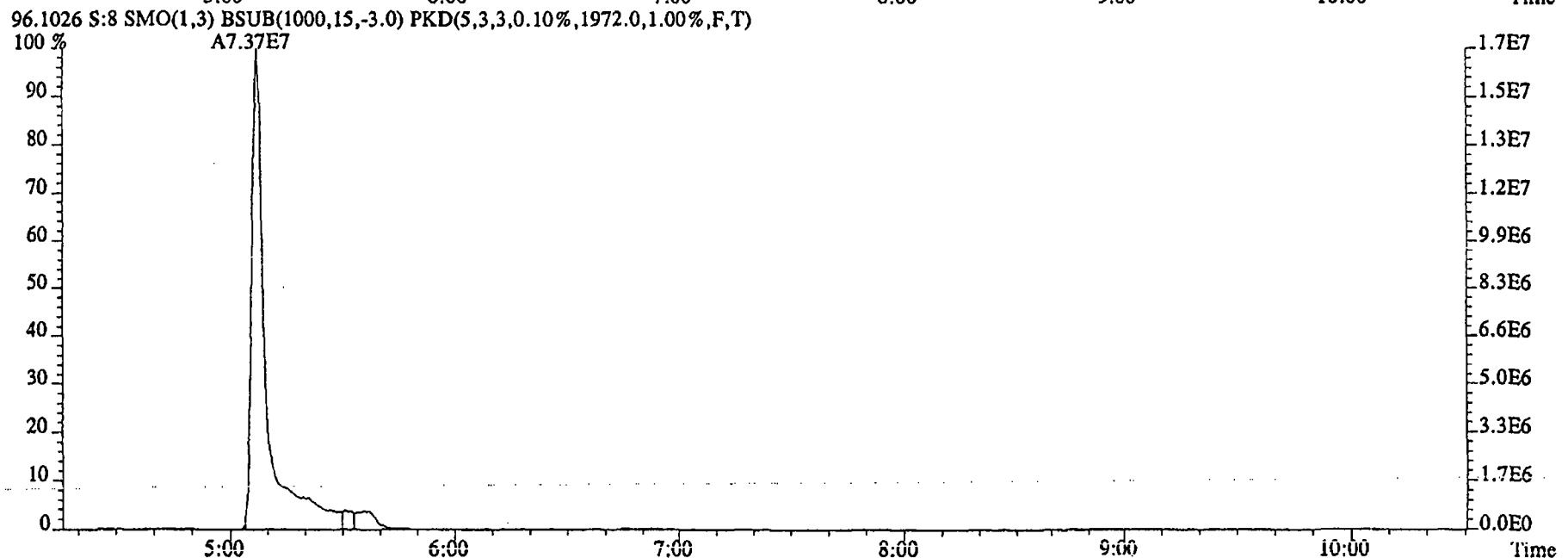
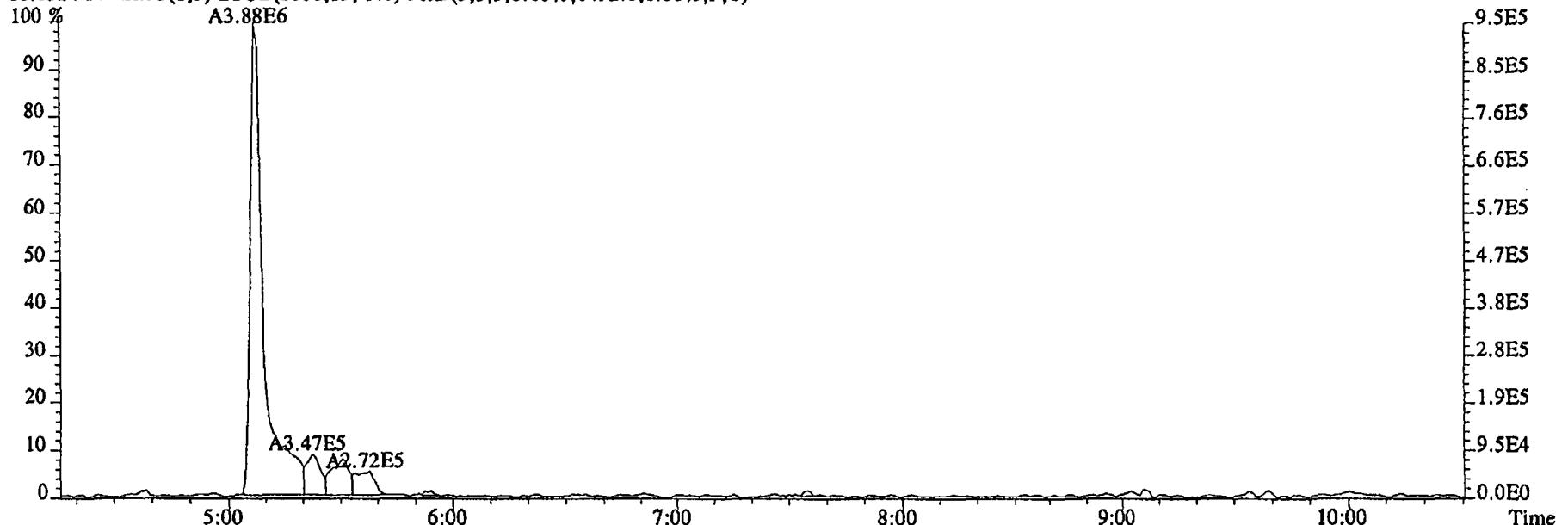
Run: 08DE045SP Analyte: 1625 Cal: 16251208045SP

ST1208 :CS1 2350-68A
ST1208D :CS4 2350-68DST1208A :CS2 2350-68B
ST1208E :CS5 2350-68E

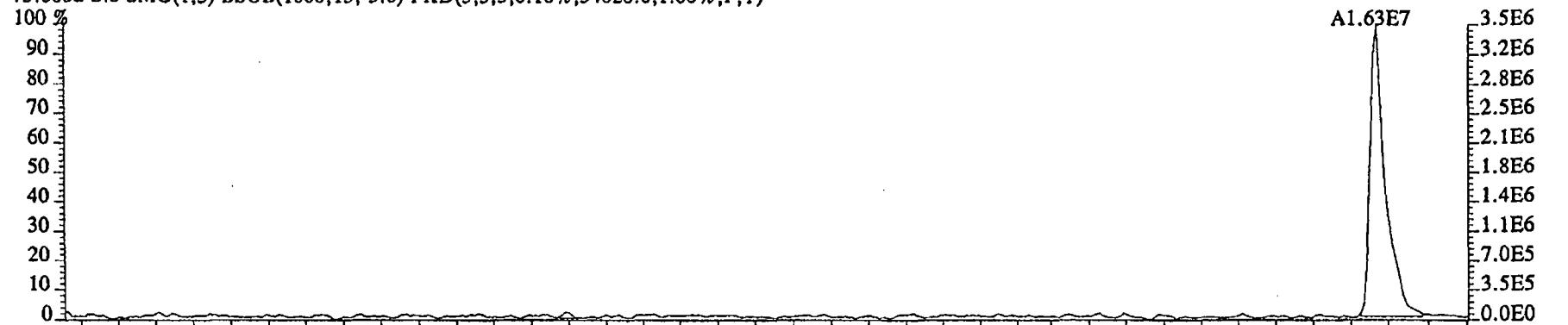
ST1208C :CS3 2350-68C

Name	Mean	S. D.	%RSD	08DE045SP		08DE045SP		08DE045SP		08DE045SP	
				S1 RRF1	S2 RRF2	S4 RRF3	S5 RRF4	S6 RRF5			
2-Chloropyridine	-	-	- %	-	-	-	-	-	-	-	-
D8-1,4-Dioxane	0.925	0.202	21.9 %	1.03	1.17	0.98	0.80	0.65			
1,4-Dioxane	1.125	0.134	12.0 %	1.03	1.07	1.02	1.16	1.34			
D5-123-TriChloroPropane	2.524	0.068	2.71 %	2.46	2.49	2.63	2.49	2.56			
1,2,3-TriChloroPropane	0.505	0.042	8.36 %	0.56	0.45	0.48	0.51	0.52			
1,2,3-TriChloroPropane	-	-	- %	-	-	-	-	-			
D6-NDMA	1.402	0.074	5.25 %	1.49	1.35	1.39	1.46	1.31			
NDMA	1.758	0.138	7.83 %	1.98	1.68	1.66	1.66	1.80			
2-Chloropyridine	-	-	- %	-	-	-	-	-			

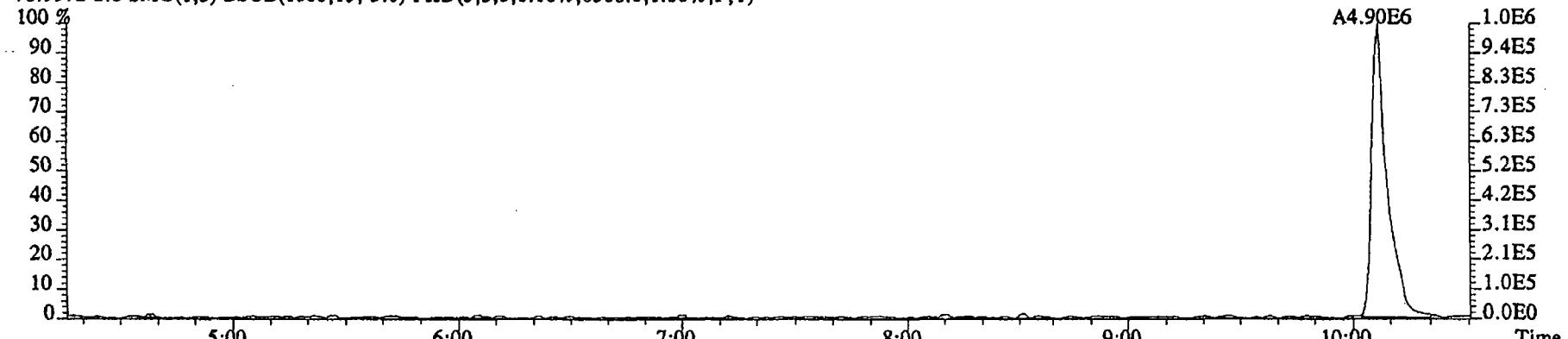
File:08DE045SP #1-462 Acq: 8-DEC-2004 18:58:44 GC EI + Voltage SIR 70SE
Sample#8 Text:ST1208F :CS3 2350-68C Exp:NDMAVOA
88.0524 S:8 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,6492.0,1.00%,F,T)



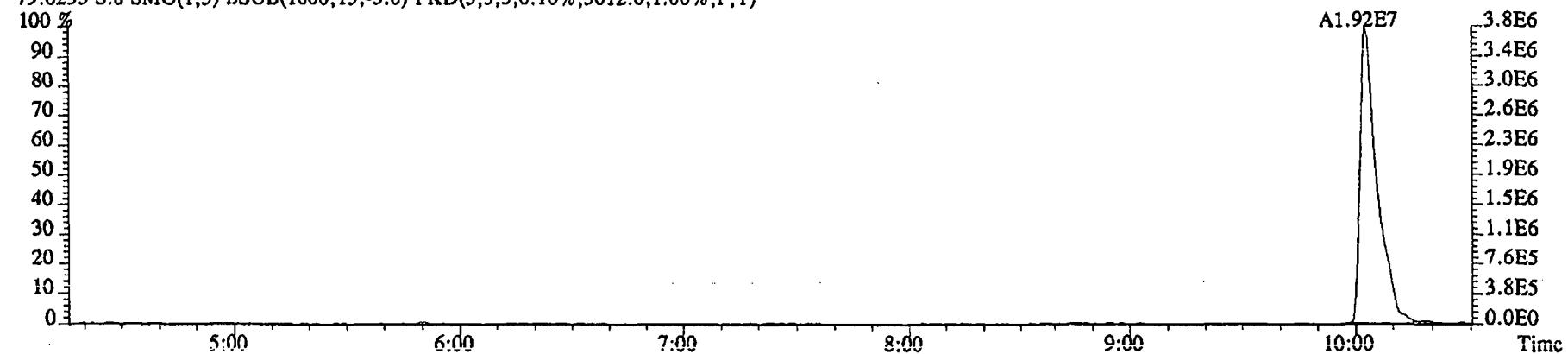
File:08DE045SP #1-462 Acq: 8-DEC-2004 18:58:44 GC EI+ Voltage SIR 70SE
Sample#8 Text:ST1208F :CS3 2350-68C Exp:NDMAVOA
75.0002 S:8 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,54020.0,1.00%,F,T)



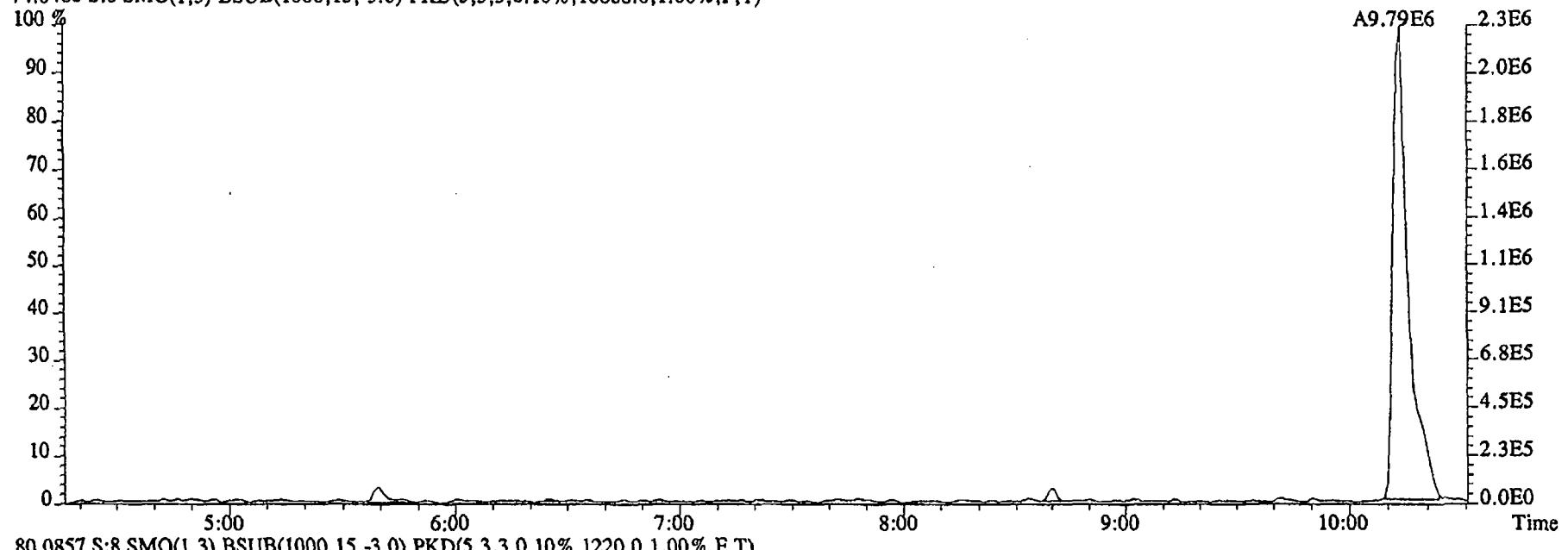
76.9972 S:8 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,6308.0,1.00%,F,T)



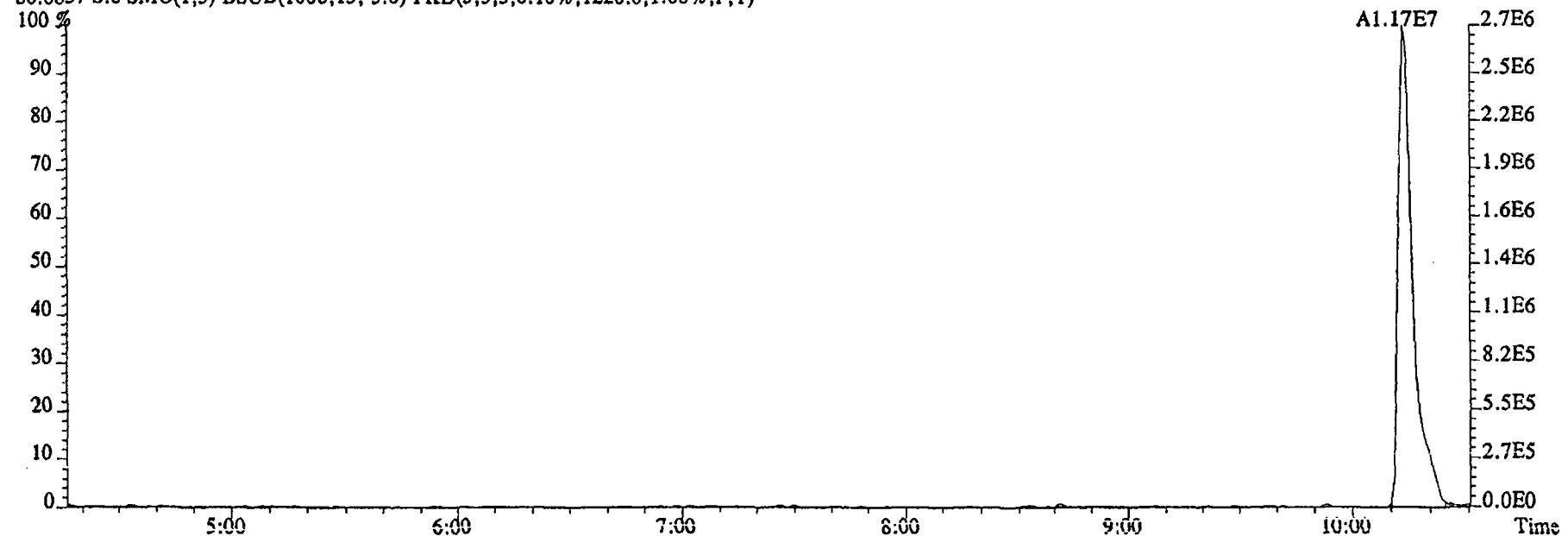
79.0253 S:8 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,5012.0,1.00%,F,T)



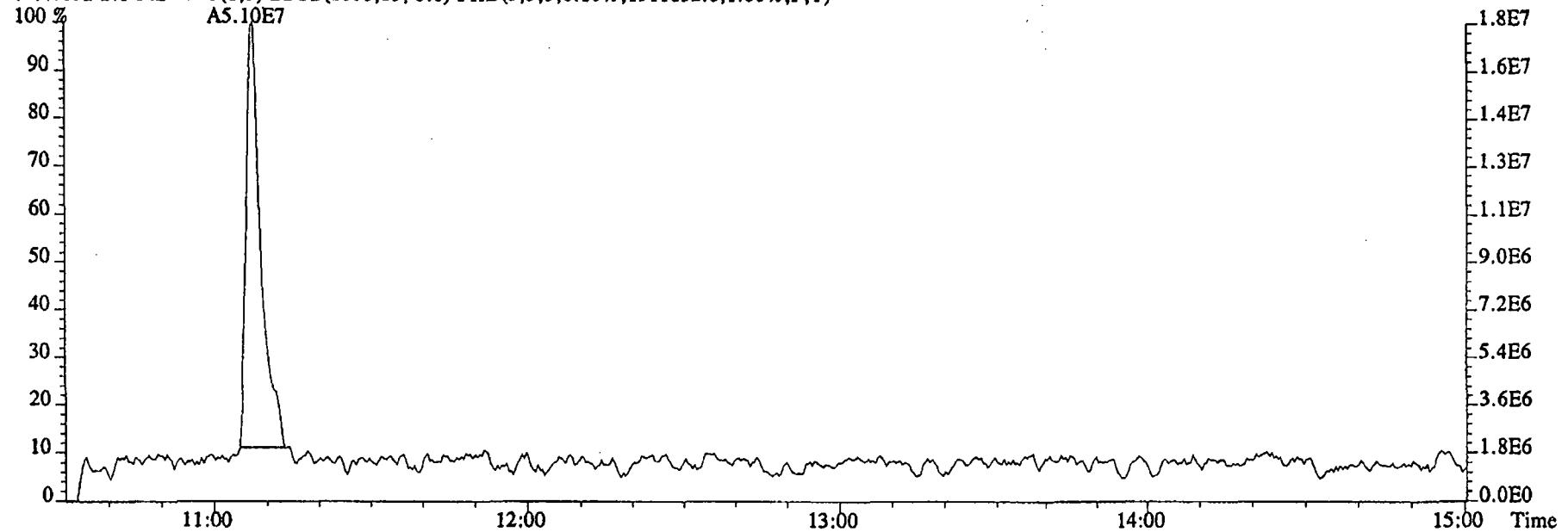
File:08DE04SSP #1-462 Acq: 8-DEC-2004 18:58:44 GC EI+ Voltage SIR 70SE
Sample#8 Text:ST1208F :CS3 2350-68C Exp:NDMAVOA
74.0480 S:8 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,16888.0,1.00%,F,T)



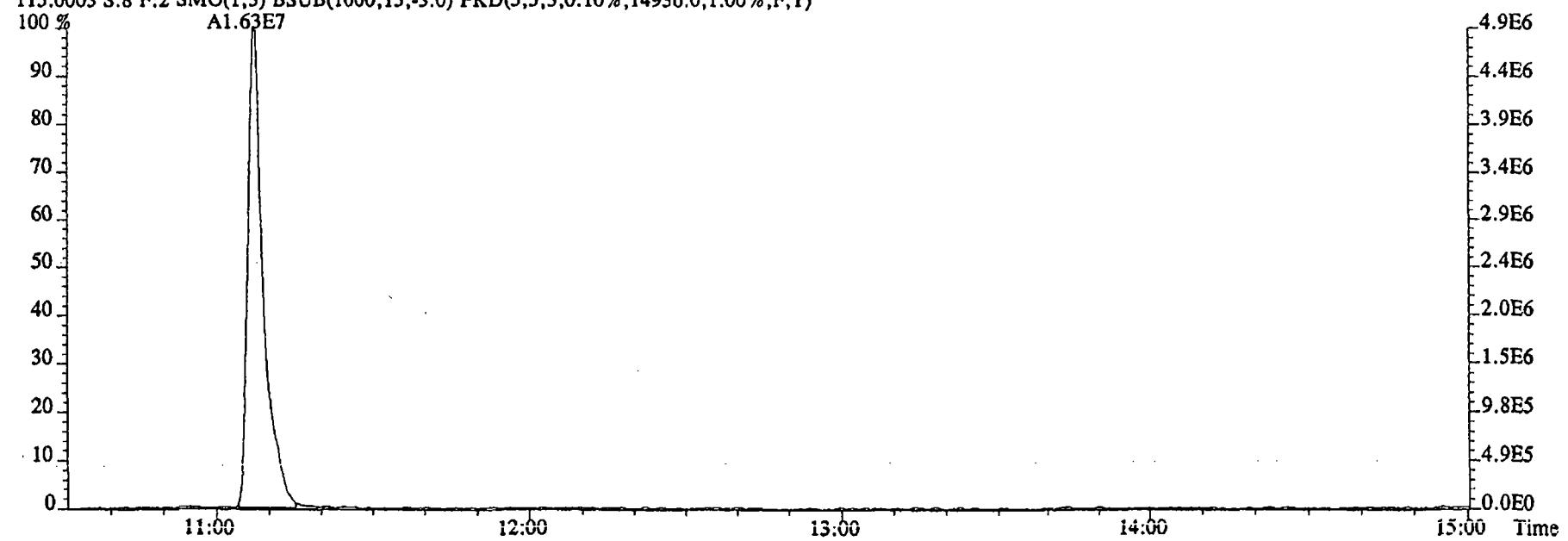
80.0857 S:8 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,1220.0,1.00%,F,T)



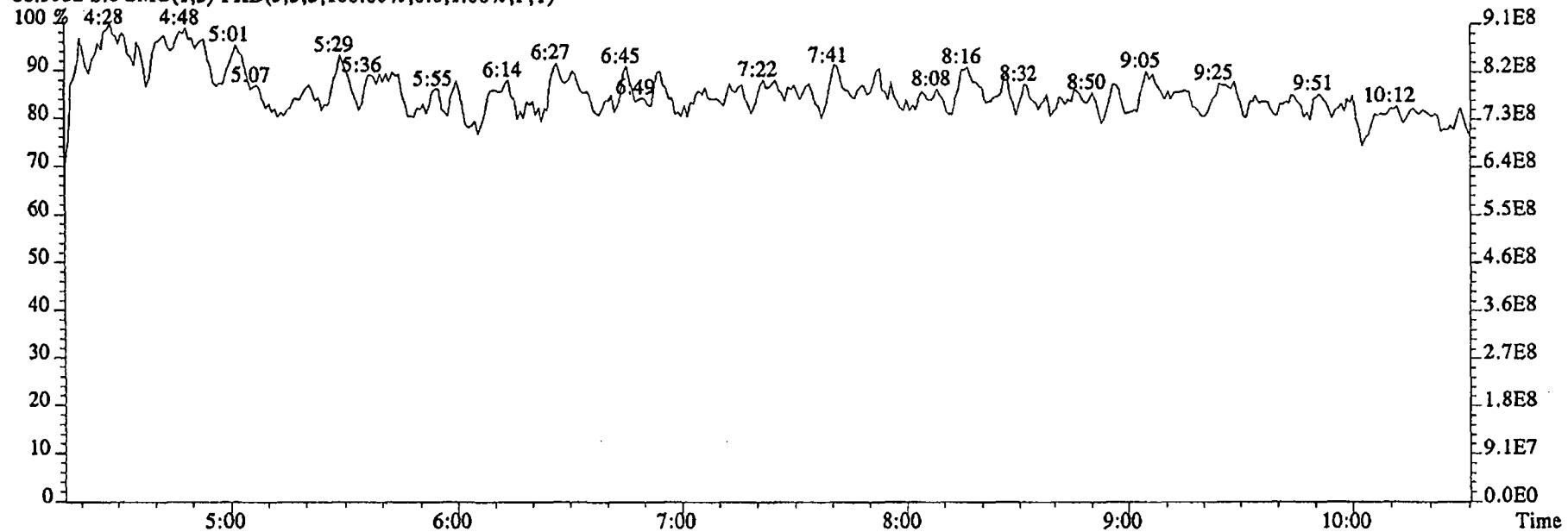
File:08DE045SP #1-626 Acq: 8-DEC-2004 18:58:44 GC EI+ Voltage SIR 70SE
Sample#8 Text:ST1208F :CS3 2350-68C Exp:NDMAVOA
113.0032 S:8 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,1911632.0,1.00%,F,T)



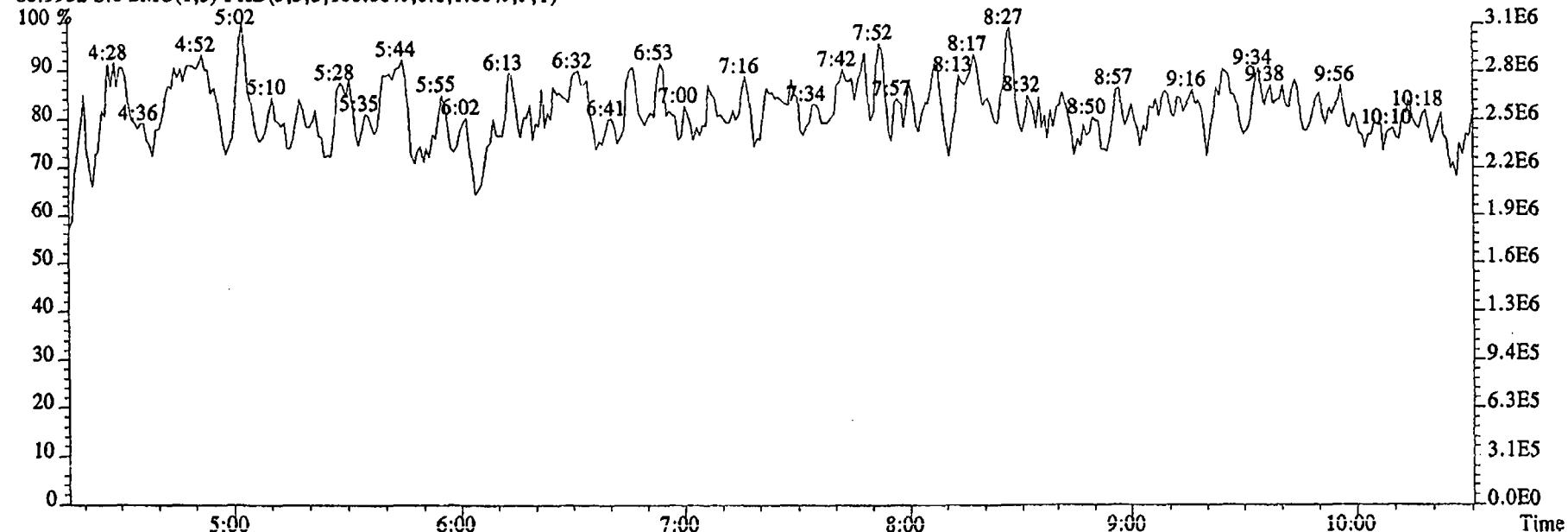
115.0003 S:8 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,14936.0,1.00%,F,T)



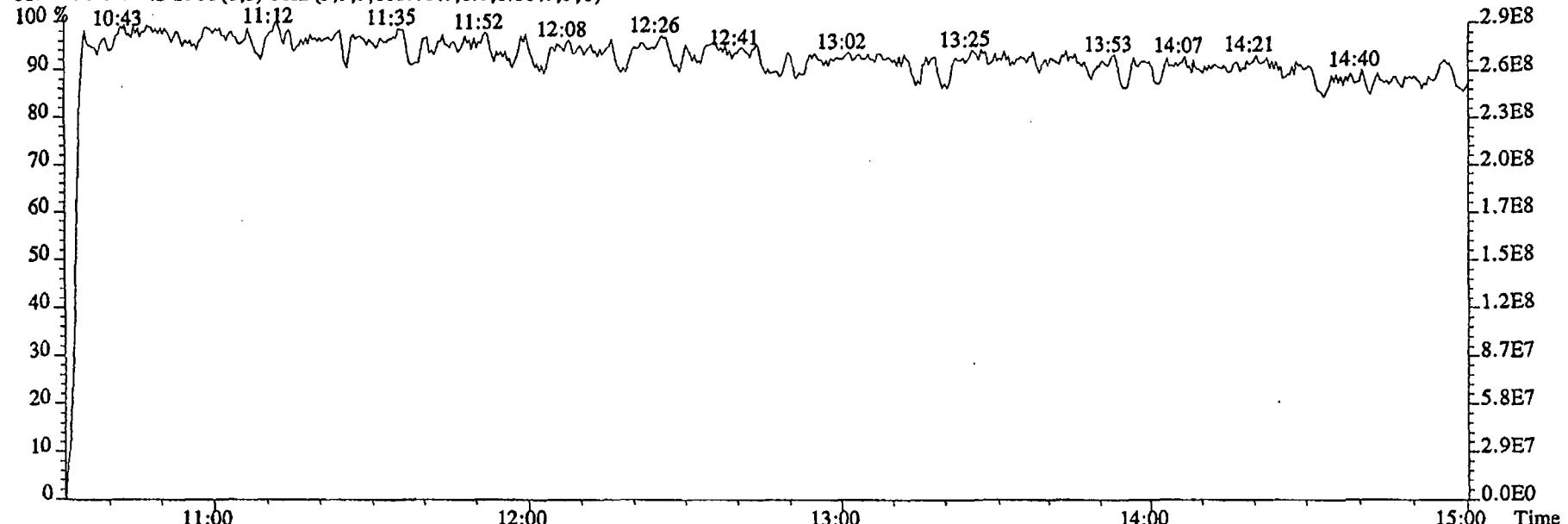
File:08DE045SP #1-462 Acq: 8-DEC-2004 18:58:44 GC EI+ Voltage SIR 70SE
 Sample#8 Text:ST1208F :CS3 2350-68C Exp:NDMAVOA
 68.9952 S:8 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



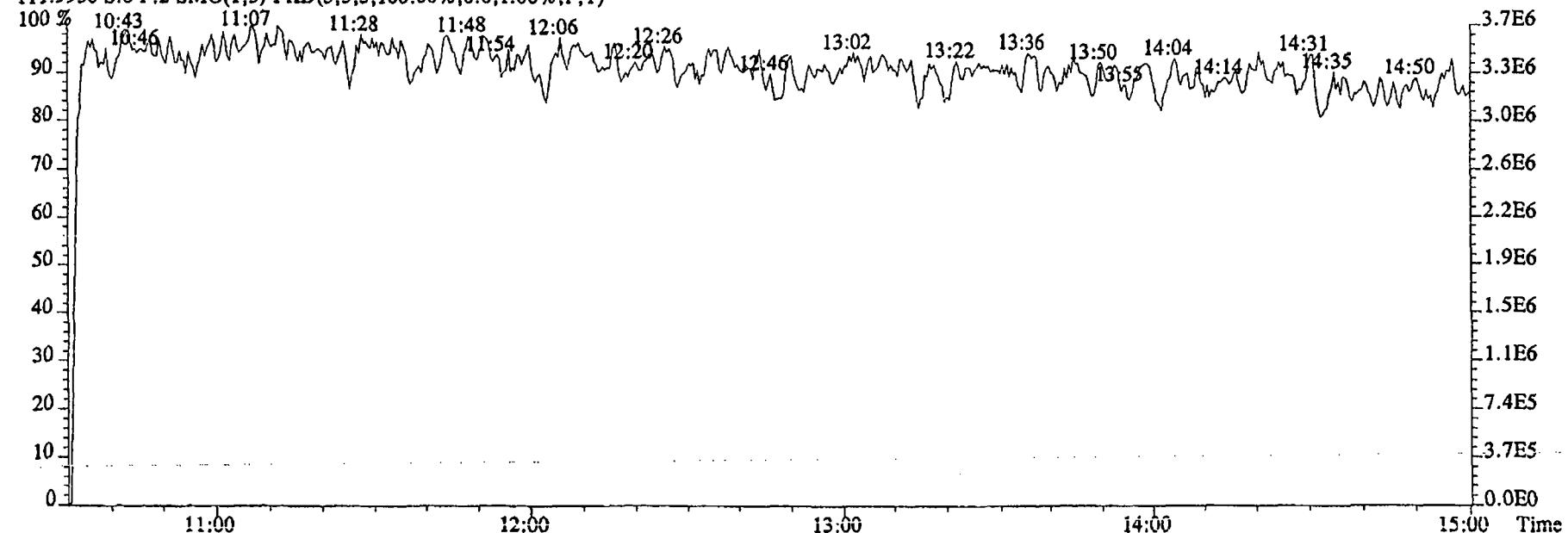
80.9952 S:8 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



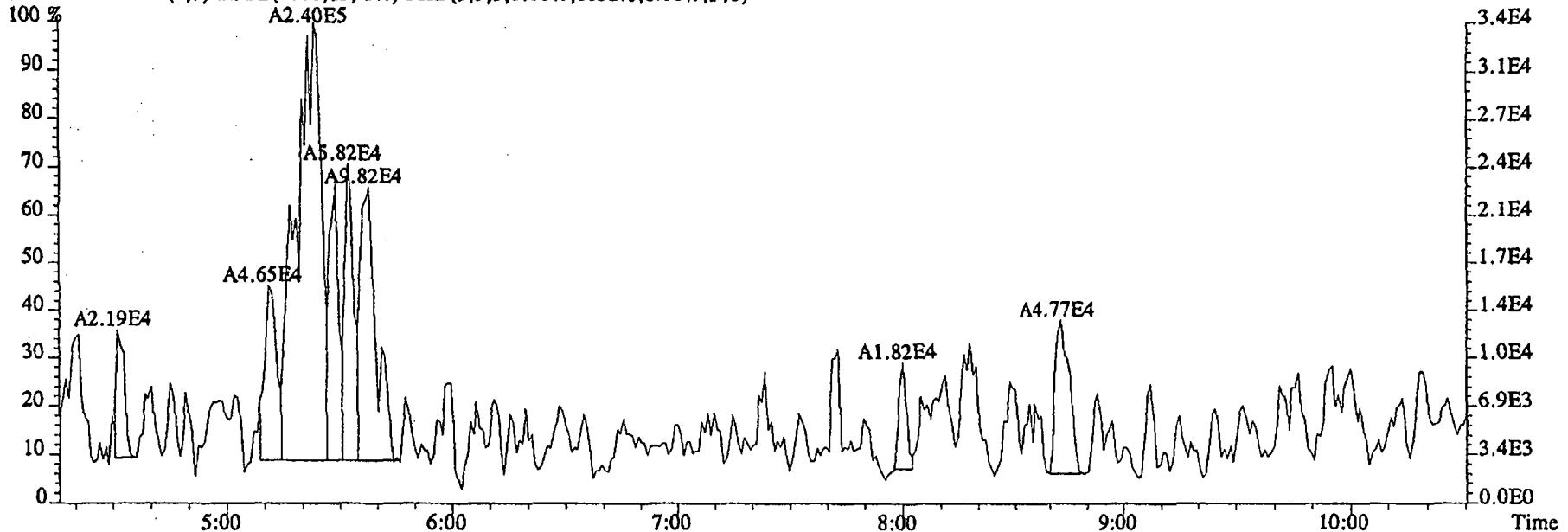
File:08DE045SP #1-626 Acq: 8-DEC-2004 18:58:44 GC EI+ Voltage SIR 70SE
Sample#8 Text:ST1208F :CS3 2350-68C Exp:NDMAVOA
118.9920 S:8 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



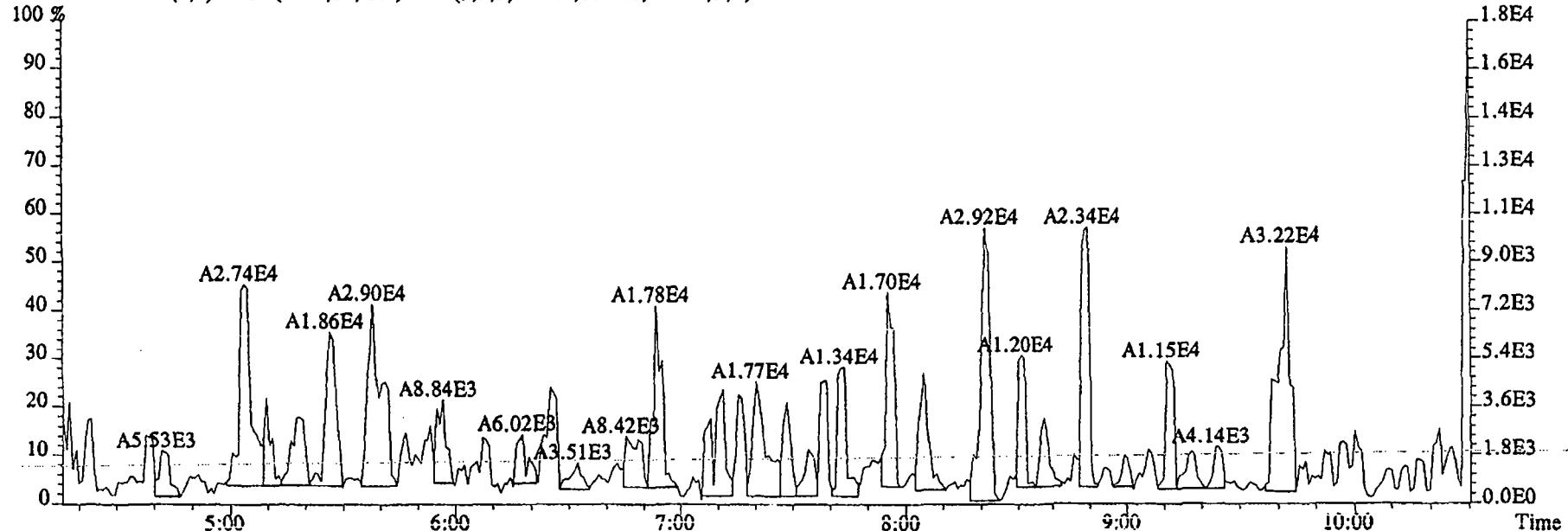
111.9936 S:8 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



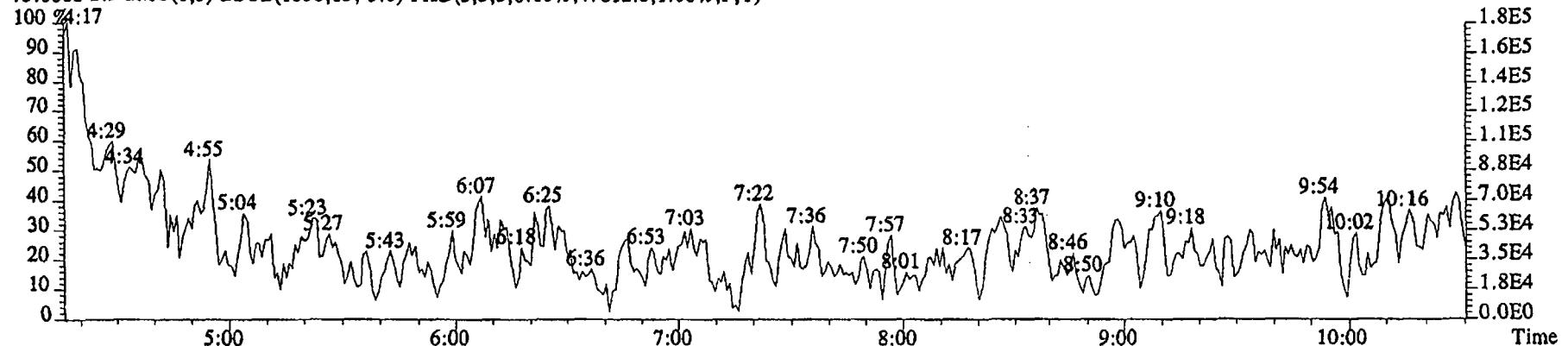
File:08DE045SP #1-462 Acq: 8-DEC-2004 19:19:10 GC EI + Voltage SIR 70SE
 Sample#9 Text:SB1208A :Solvent Blank DCM Exp:NDMAVOA
 88.0524 S:9 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,6132.0,1.00%,F,T)



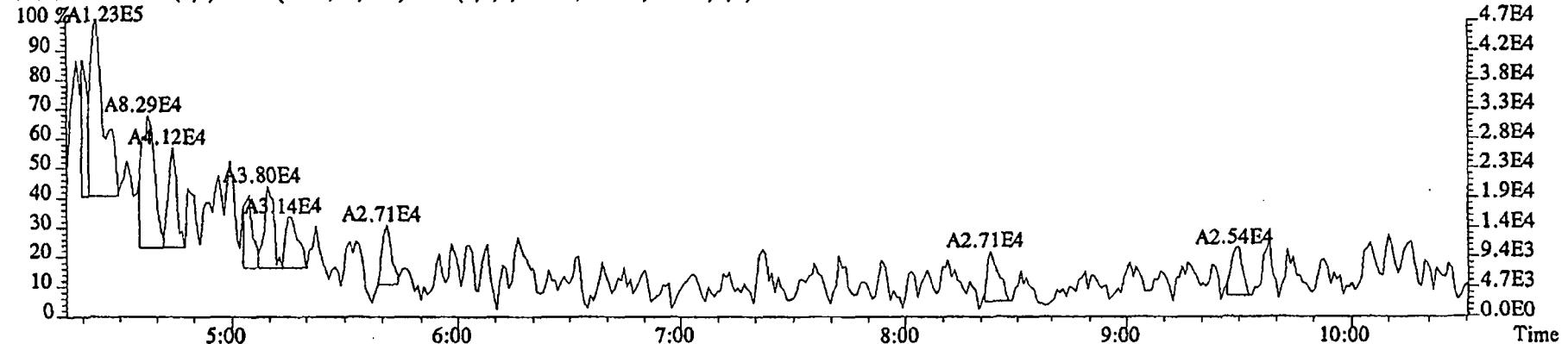
96.1026 S:9 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,1112.0,1.00%,F,T)



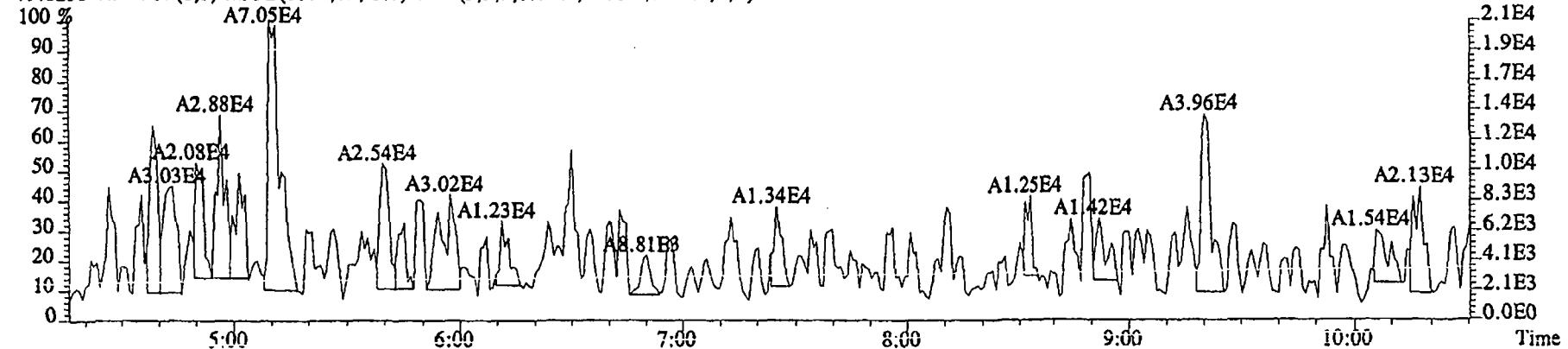
File:08DE045SP #1-462 Acq: 8-DEC-2004 19:19:10 GC EI+ Voltage SIR 70SE
 Sample#9 Text:SB1208A :Solvent Blank DCM Exp:NDMAVOA
 75.0002 S:9 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,47812.0,1.00%,F,T)



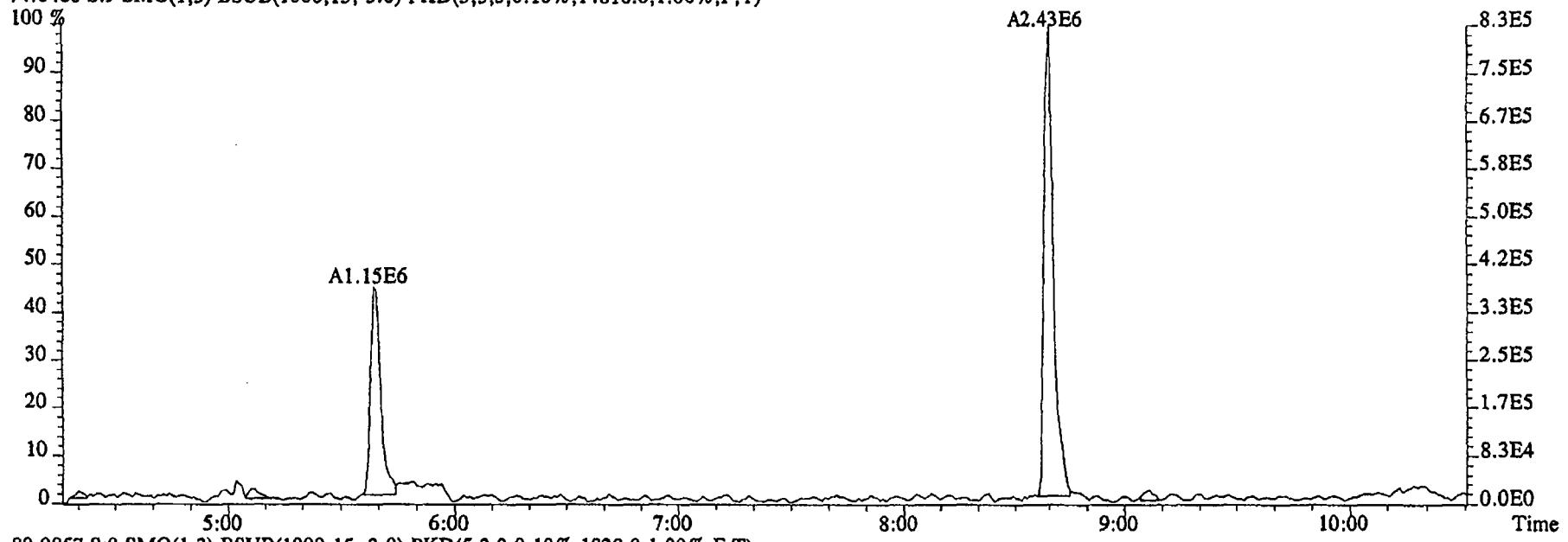
76.9972 S:9 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,6896.0,1.00%,F,T)



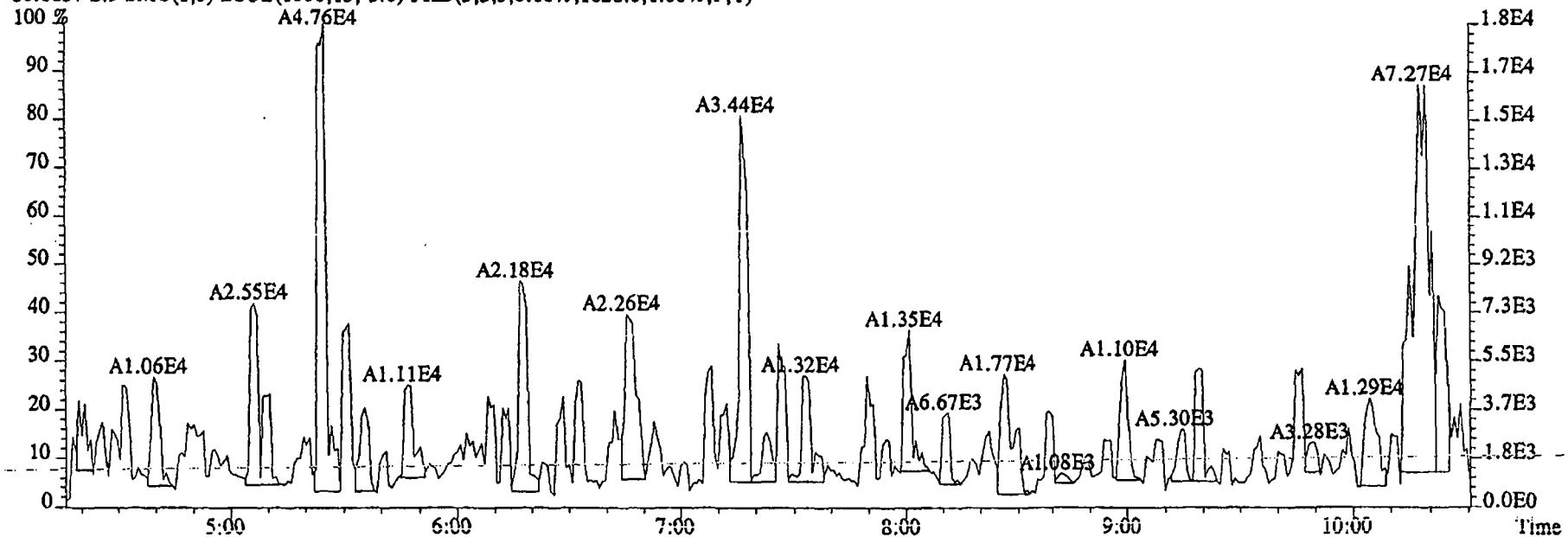
79.0253 S:9 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,4468.0,1.00%,F,T)



File:08DE045SP #1-462 Acq: 8-DEC-2004 19:19:10 GC EI+ Voltage SIR 70SE
 Sample#9 Text:SB1208A :Solvent Blank DCM Exp:NDMAVOA
 74.0480 S:9 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,14816.0,1.00%,F,T)



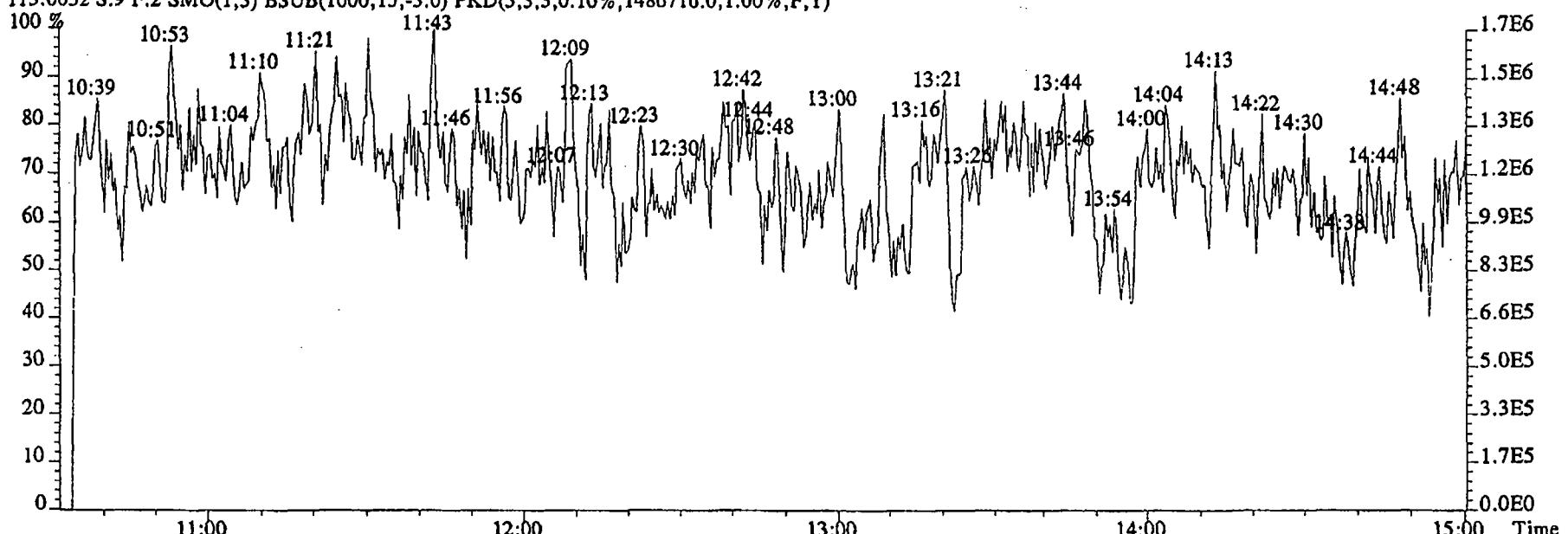
80.0857 S:9 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,1828.0,1.00%,F,T)



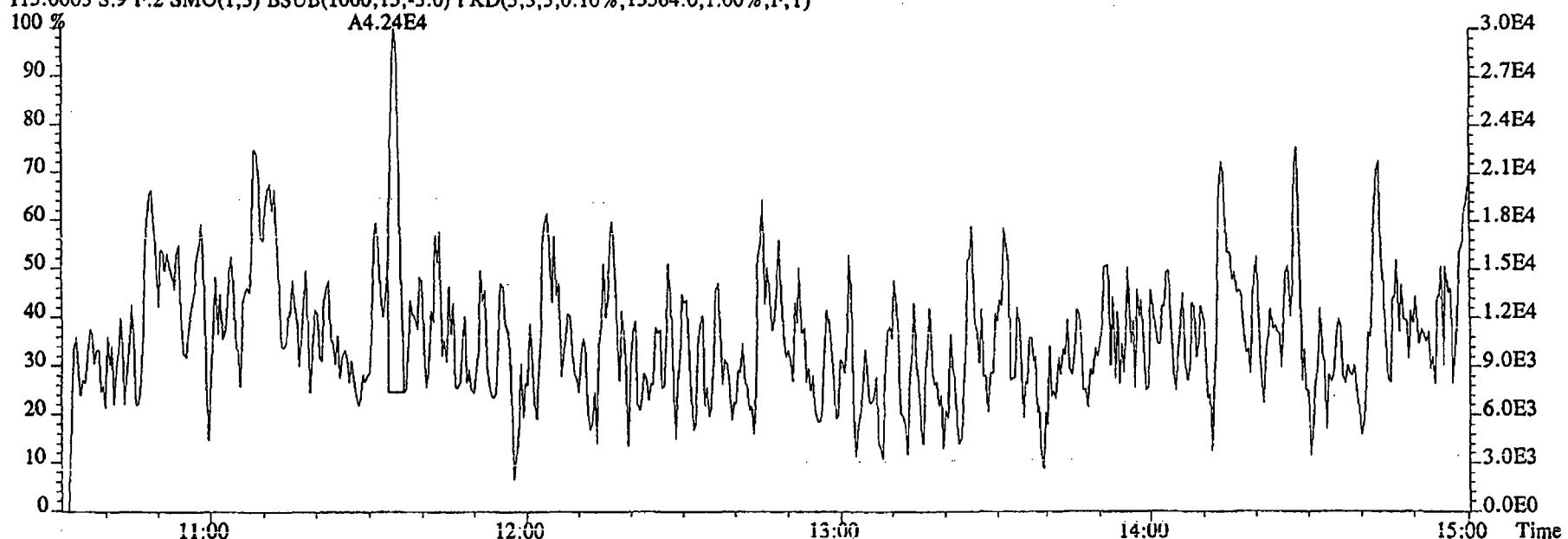
File:08DE045SP #1-626 Acq: 8-DEC-2004 19:19:10 GC EI+ Voltage SIR 70SE

Sample#9 Text:SB1208A :Solvent Blank DCM Exp:NDMAVOA

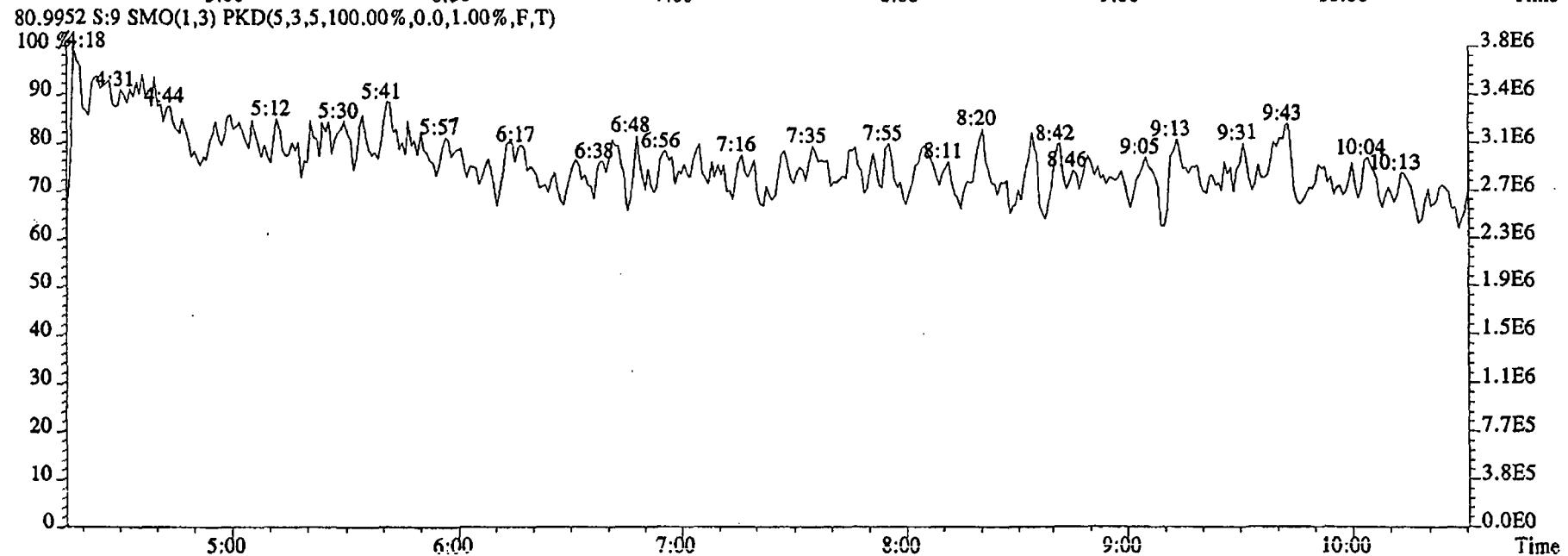
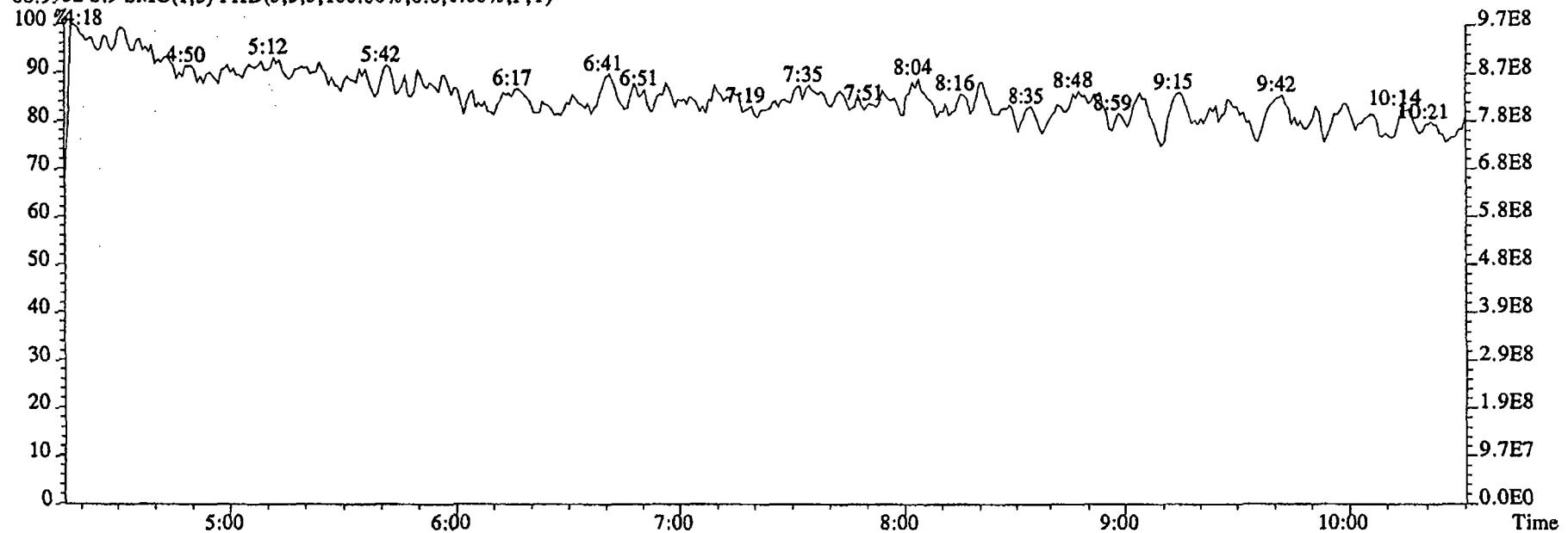
113.0032 S:9 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,1486716.0,1.00%,F,T)



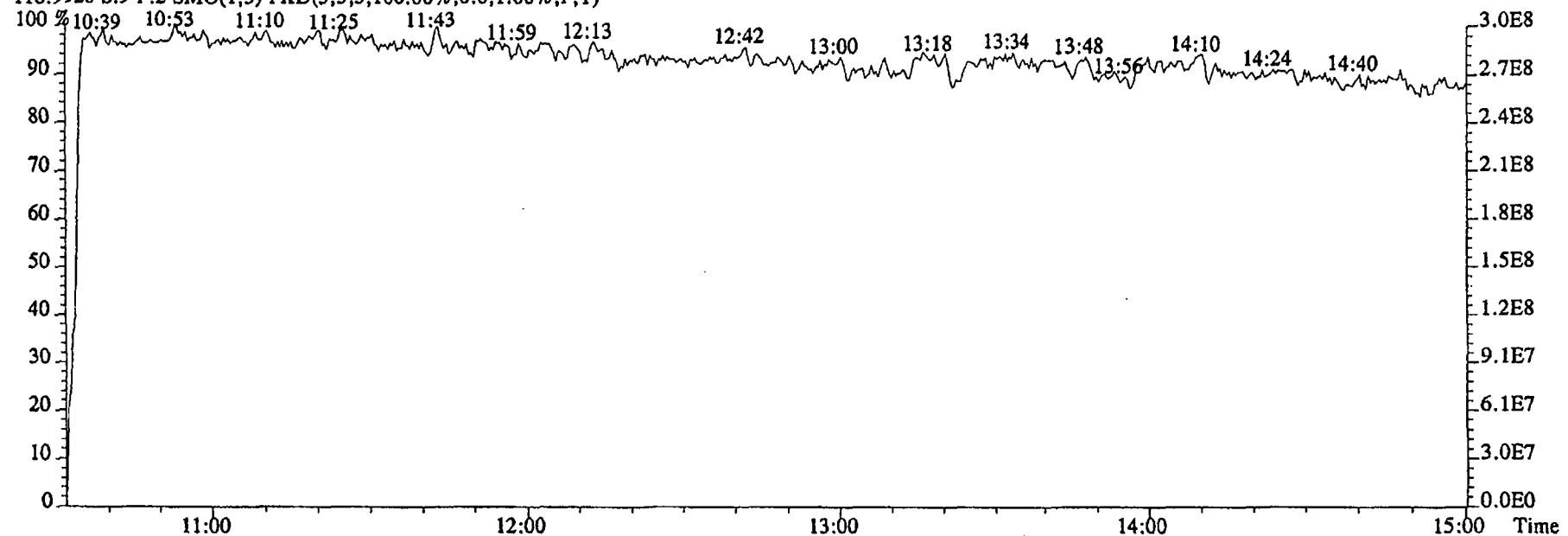
115.0003 S:9 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,13564.0,1.00%,F,T)



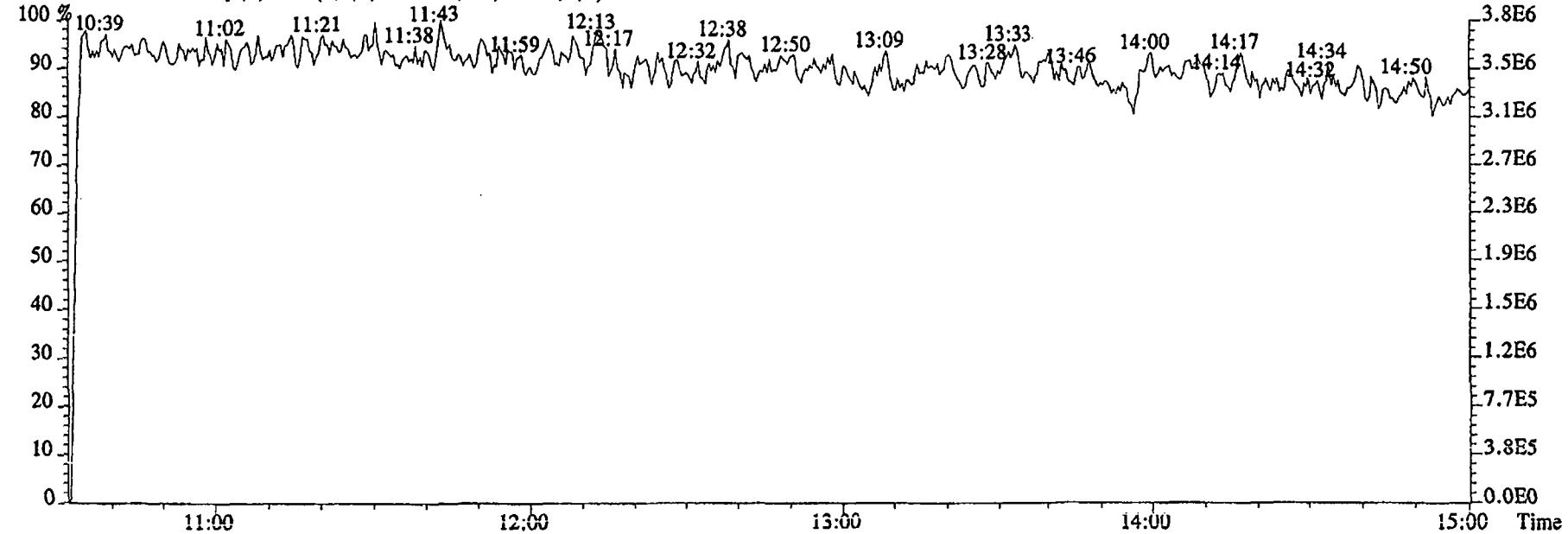
File:08DE045SP #1-462 Acq: 8-DEC-2004 19:19:10 GC EI+ Voltage SIR 70SE
 Sample#9 Text:SB1208A ;Solvent Blank DCM Exp:NDMAVOA
 68.9952 S:9 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



File:08DE045SP #1-626 Acq: 8-DEC-2004 19:19:10 GC EI+ Voltage SIR 70SE
Sample#9 Text:SB1208A :Solvent Blank DCM Exp:NDMAVOA
118.9920 S:9 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



111.9936 S:9 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



Initial Calibration

Includes (as applicable):

runlog

standard raw data

statistical summary

ms tune data

Initial Calibration Checklist
High Resolution

ICAL ID K-251208045SP

Method ID 53P 1625
110 21064

Column ID SP-2331

Instrument ID 53P

STD ID's ST1268-ST1294, ST1263C-ST1281E

STD Solution 2380-68(A-e)

Analyzed By AM

Multiplier Setting 720

Prepared By KJS

Date Analyzed 12/12/04

Reviewed By C. Pickrell

Date Prepared 12/12/04

Date Reviewed 12/14/04

ANALYSIS OF ICAL		
	INITIATED	REVIEWED
Curve summary present?	✓	✓
Hardcopies of chromatograms for CS1-CS5 present?	✓	✓
Copy of log-file present?	✓	✓
Static resolution check present?	✓	✓
Target file RT's correct?	✓	✓
%RSD within method-specified limits?	✓	✓
Signal-to-noise criteria met?	✓	✓
Isotopic ratios within limits?	N/A	N/A
High point free of saturation?	✓	✓
Are chromatographic windows correct?	✓	✓
Manual reintegration's checked and hardcopies included?	N/A	N/A

COMMENTS:

Method 8290: %RSD \leq 20% for natives, \leq 30% for labeled analytes; S/N \geq 10

Method 1613A: %CV \leq 35% (See Table 7, Method 1613A); S/N \geq 10

Method 23: %RSD \leq values specified in Table 5, Method 23; S/N $>$ 2.5

PAH: %RSD \leq 30% for natives and labeled compounds; S/N \geq 10

PCB: %RSD \leq 20% for natives, \leq 40% for labeled compounds; S/N \geq 2.5

NCASI 551: %RSD \leq 20% for natives and labeled compounds; \geq 5

DBD/DBF: %RSD \leq 30% for natives, \leq 40% for labeled analytes; S/N \geq 10

Run: 08DE045SPIC Analyte: 1625

Cal: 16251208045SP

ST1208 :CS1 2350-68A
ST1208D :CS4 2350-68DST1208A :CS2 2350-68B
ST1208E :CS5 2350-68E

ST1208C :CS3 2350-68C

Name	Mean	S. D.	%RSD	08DE045SP				
				S1	S2	S4	S5	S6
				RRF1	RRF2	RRF3	RRF4	RRF5
2-Chloropyridine	-	-	- %	-	-	-	-	-
D8-1,4-Dioxane	0.925	0.202	21.9 %	1.03	1.17	0.98	0.80	0.65
1,4-Dioxane	1.125	0.134	12.0 %	1.03	1.07	1.02	1.16	1.34
D5-123-TriChloroPropane	2.524	0.068	2.71 %	2.46	2.49	2.63	2.49	2.56
1,2,3-TriChloroPropane	0.505	0.042	8.36 %	0.56	0.45	0.48	0.51	0.52
1,2,3-TriChloroPropane	-	-	- %	-	-	-	-	-
D6-NDMA	1.402	0.074	5.25 %	1.49	1.35	1.39	1.46	1.31
NDMA	1.758	0.138	7.83 %	1.98	1.68	1.66	1.66	1.80
2-Chloropyridine	-	-	- %	-	-	-	-	-

Run #1 Filename 08DE045SP S: 1 I: 1
 Acquired: 8-DEC-04 16:31:35 Processed: 8-DEC-04 18:35:10
 Run: 08DE045SPIC₇ Analyte: 1625 Cal: 16251208045SP
 Comments:

Sample text: ST1208 :CS1 2350-68A

Name	Resp	RA	RT	RRF		Mod?
2-Chloropyridine	35018600		11:08	-	200.00	n
D8-1,4-Dioxane	180399000		5:07	1.03	1000.00	n
1,4-Dioxane	372387		5:08	1.03	2.00	n
D5-123-TriChloroPropane	43092200		10:04	2.46	100.00	n
1,2,3-TriChloroPropane	485895		10:06	0.56	2.00	n
1,2,3-TriChloroPropane	1319880		10:07	-	2.00	n
D6-NDMA	26110800		10:14	1.49	100.00	n
NDMA	1034040		10:13	1.98	2.00	n
2-Chloropyridine	115245000		11:08	-	200.00	n

Run #2 Filename 08DE045SP S: 2 I: 1
 Acquired: 8-DEC-04 16:51:55 Processed: 8-DEC-04 18:35:10
 Run: 08DE045SPIC Analyte: 1625 Cal: 16251208045SP
 Comments:

Sample text: ST1208A :CS2 2350-68B

Name	Resp	RA	RT	RRF		Mod?
2-Chloropyridine	23491400		11:08	-	200.00	n
D8-1,4-Dioxane	136974000		5:07	1.17	1000.00	n
1,4-Dioxane	1461060		5:07	1.07	10.00	n
D5-123-TriChloroPropane	29195800		10:04	2.49	100.00	n
1,2,3-TriChloroPropane	1311380		10:07	0.45	10.00	n
1,2,3-TriChloroPropane	4270440		10:07	-	10.00	n
D6-NDMA	15856800		10:14	1.35	100.00	n
NDMA	2670400		10:13	1.68	10.00	n
2-Chloropyridine	77638500		11:08	-	200.00	n

Run #3 Filename 08DE045SP S: 4 I: 1
 Acquired: 8-DEC-04 17:37:04 Processed: 8-DEC-04 18:35:11
 Run: 08DE045SPIC Analyte: 1625 Cal: 16251208045SP
 Comments:

Sample text: ST1208C :CS3 2350-68C

Name	Resp	RA	RT	RRF	Mod?
2-Chloropyridine	16270600		11:07	-	200.00 n
D8-1,4-Dioxane	79647400		5:07	0.98	1000.00 n
1,4-Dioxane	4063510		5:07	1.02	50.00 n
D5-123-TriChloroPropane	21386900		10:03	2.63	100.00 n
1,2,3-TriChloroPropane	5185860		10:06	0.48	50.00 n
1,2,3-TriChloroPropane	15990600		10:06	-	50.00 n
D6-NDMA	11338200		10:14	1.39	100.00 n
NDMA	9438330		10:14	1.66	50.00 n
2-Chloropyridine	57087100		11:07	-	200.00 n

Run #4 Filename 08DE045SP S: 5 I: 1
 Acquired: 8-DEC-04 17:57:28 Processed: 8-DEC-04 18:35:11
 Run: 08DE045SPIC Analyte: 1625 Cal: 16251208045SP
 Comments:

Sample text: ST1208D :CS4 2350-68D

Name	Resp	RA	RT	RRF		Mod?
2-Chloropyridine	30584500		11:07	-	200.00	n
D8-1,4-Dioxane	121752000		5:07	0.80	1000.00	n
1,4-Dioxane	28293400		5:07	1.16	200.00	n
D5-123-TriChloroPropane	38075600		10:03	2.49	100.00	n
1,2,3-TriChloroPropane	38739500		10:07	0.51	200.00	n
1,2,3-TriChloroPropane	126405000		10:07	-	200.00	n
D6-NDMA	22302600		10:14	1.46	100.00	n
NDMA	73905600		10:14	1.66	200.00	n
2-Chloropyridine	100033000		11:07	-	200.00	n

Run #5 Filename 08DE045SP S: 6 I: 1
 Acquired: 8-DEC-04 18:17:53 Processed: 8-DEC-04 18:35:12
 Run: 08DE045SPIC Analyte: 1625 Cal: 16251208045SP
 Comments:

Sample text: ST1208E :CS5 2350-68E

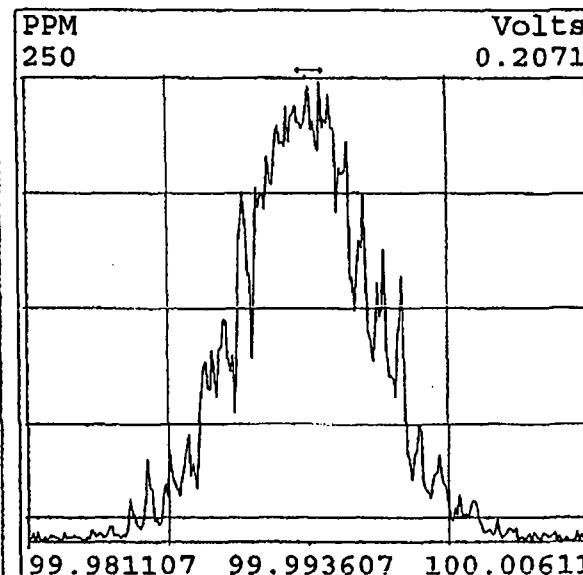
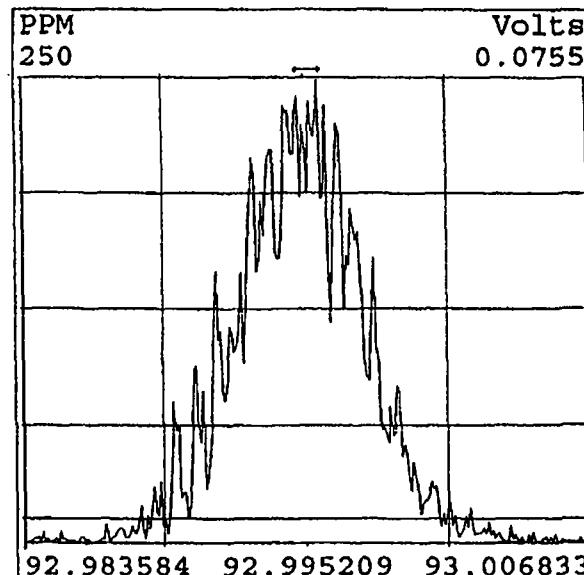
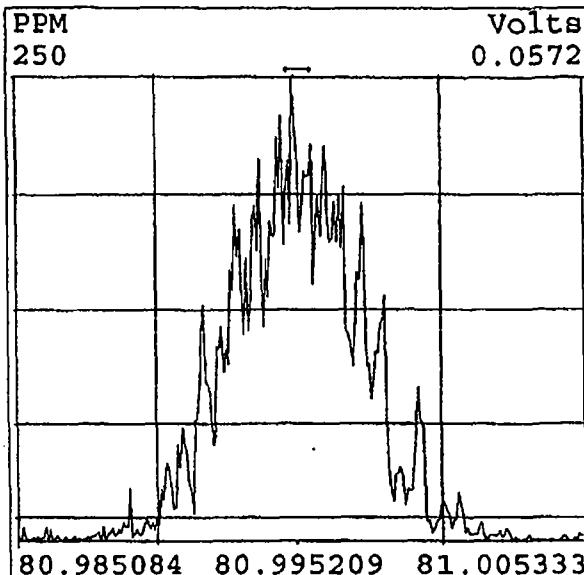
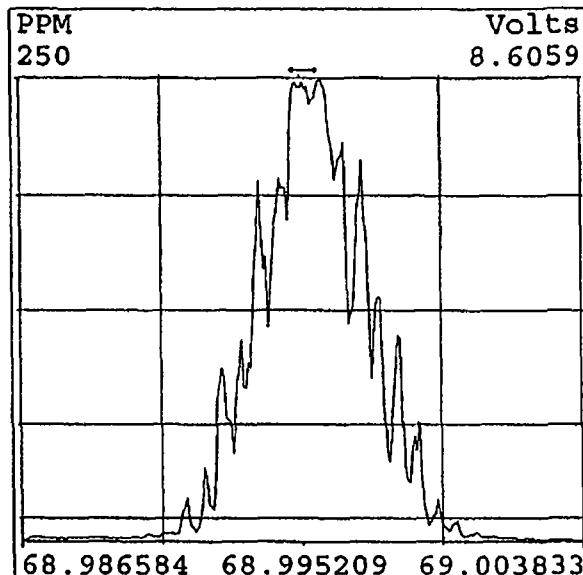
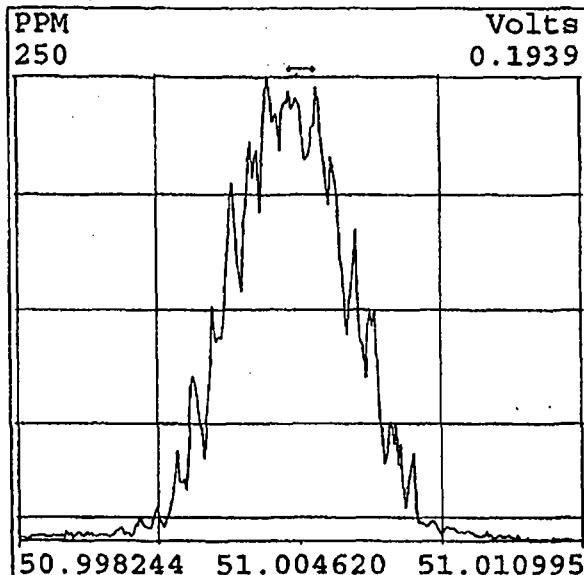
Name	Resp	RA	RT	RRF		Mod?
2-Chloropyridine	38280400		11:07	-	200.00	n
D8-1,4-Dioxane	124577000		5:07	0.65	1000.00	n
1,4-Dioxane	167435000		5:07	1.34	1000.00	n
D5-123-TriChloroPropane	48932700		10:03	2.56	100.00	n
1,2,3-TriChloroPropane	252814000		10:06	0.52	1000.00	n
1,2,3-TriChloroPropane	816514000		10:07	-	1000.00	n
D6-NDMA	25154800		10:14	1.31	100.00	n
NDMA	453652000		10:13	1.80	1000.00	n
2-Chloropyridine	124573000		11:07	-	200.00	n

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
08DE045SP	1	ST1208	CS1 2350-68A				1.000	
08DE045SP	2	ST1208A	CS2 2350-68B				1.000	
08DE045SP	3	ST1208B	CS3 2350-68C <i>NT 0150 12-1444</i>				1.000	
08DE045SP	4	ST1208C	CS3 2350-68C				1.000	
08DE045SP	5	ST1208D	CS4 2350-68D				1.000	
08DE045SP	6	ST1208E	CS5 2350-68E				1.000	
08DE045SP	7	SB1208	Solvent Blank DCM				1.000	
08DE045SP	8	ST1208F	CS3 2350-68C				1.000	
08DE045SP	9	SB1208A	Solvent Blank DCM				1.000	
08DE045SP	10	G0FX0-1-AAB	G4L040125-1MB	500	1625/WATER	VS52	1.000	L
08DE045SP	11	G0FX0-1-ACC	G4L040125-1LCS	500	1625/WATER		1.000	L
08DE045SP	12	G0FX0-1-ADL	G4L040125-1DCS	500	1625/WATER		1.000	L
08DE045SP	13	G0AGN-1-AC	G4L040125-1	500	1625/WATER		0.996	L
08DE045SP	14	G0AGR-1-AC	G4L040125-2	500	1625/WATER		0.979	L
08DE045SP	15	G0AGV-1-AC	G4L040125-3	500	1625/WATER		0.973	L
08DE045SP	16	G0AVX-1-AC	G4L040125-4	500	1625/WATER		0.972	L
08DE045SP	17	G0A8Q-1-AE	G4L040211-30	500	1625/WATER		0.970	L
08DE045SP	18	GX97M-1-AA	G4L030417-1	500	1625/WATER		0.969	L
08DE045SP	19	G0A6L-1-AC	G4L040206-1	500	1625/WATER		0.986	L
08DE045SP	20	SB1208B	Solvent Blank DCM				1.000	
08DE045SP	21	ST1208G	CS3 2350-68C				1.000	
08DE045SP	22						1.000	
08DE045SP	23						1.000	
08DE045SP	24						1.000	
08DE045SP	25						1.000	
08DE045SP	26						1.000	
08DE045SP	27						1.000	
08DE045SP	28						1.000	
08DE045SP	29						1.000	
08DE045SP	30		AM 12-08-04				1.000	
08DE045SP	31						1.000	

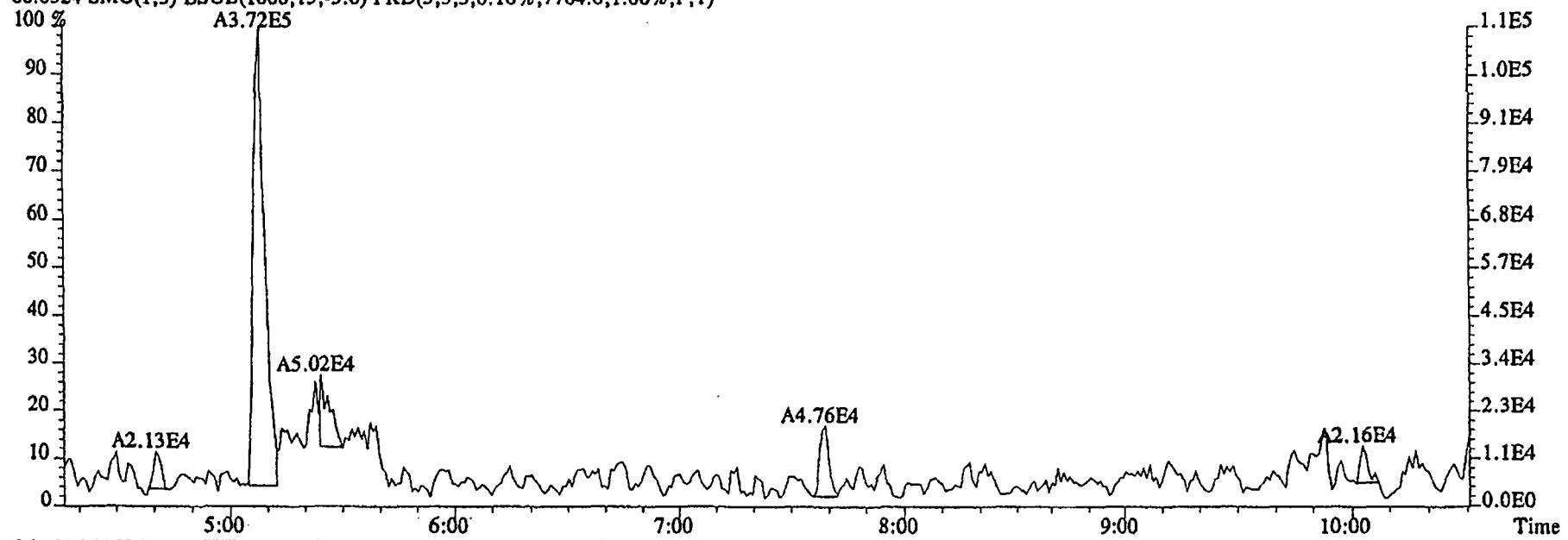
Reviewed by: *AS*

12/9/04

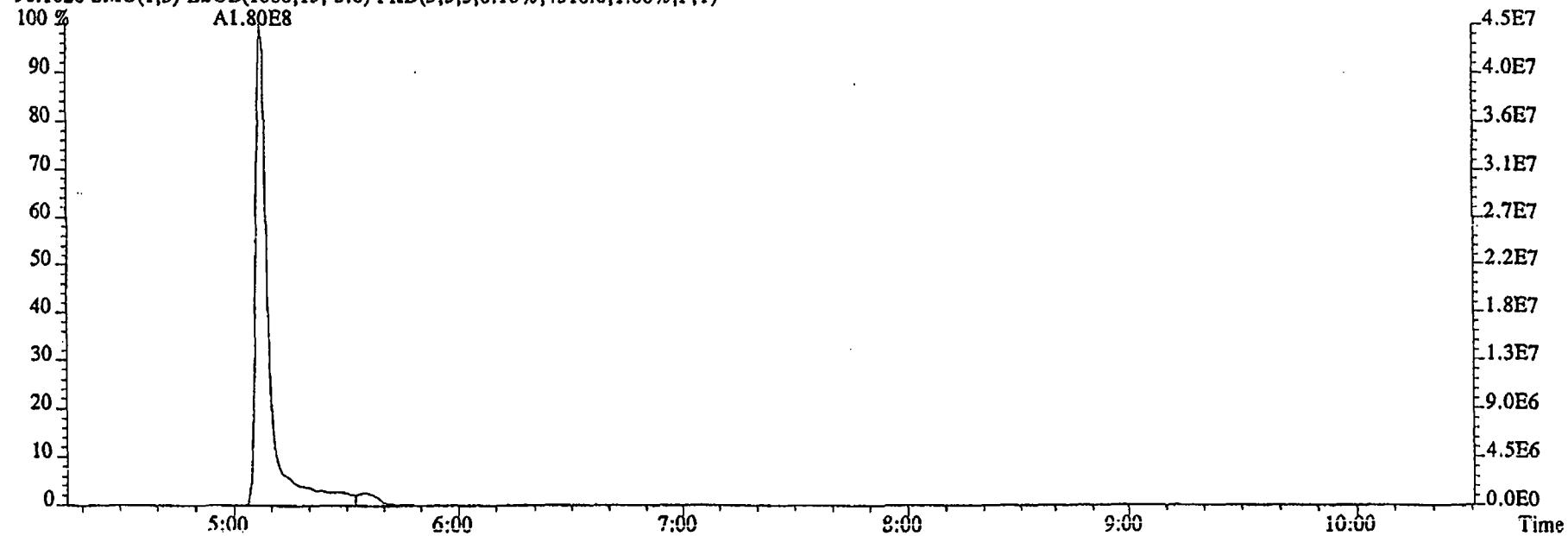
Peak Locate Examination: 8-DEC-2004:16:29 File:08DE045SP
Experiment:NDMAVOA Function:1 Reference: PFK



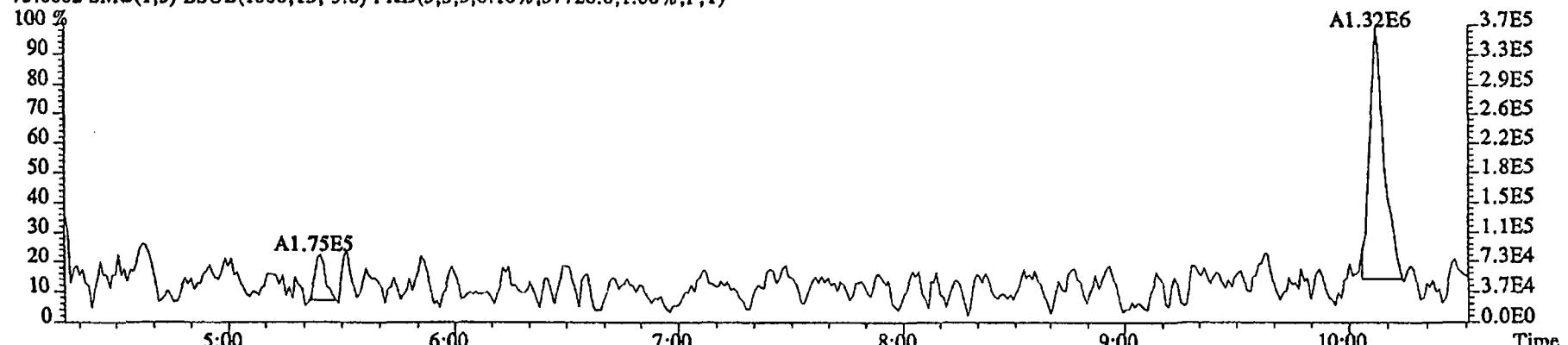
File:08DE045SP #1-462 Acq: 8-DEC-2004 16:31:35 GC EI+ Voltage SIR 70SE
 Sample#1 Text:ST1208 :CS1 2350-68A Exp:NDMAVOA
 88.0524 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,7764.0,1.00%,F,T)



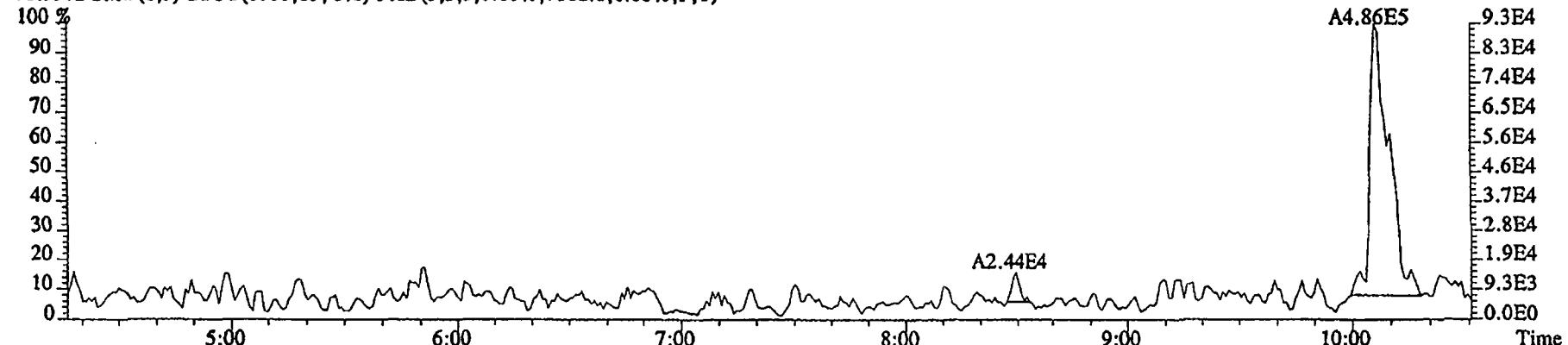
96.1026 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,4516.0,1.00%,F,T)



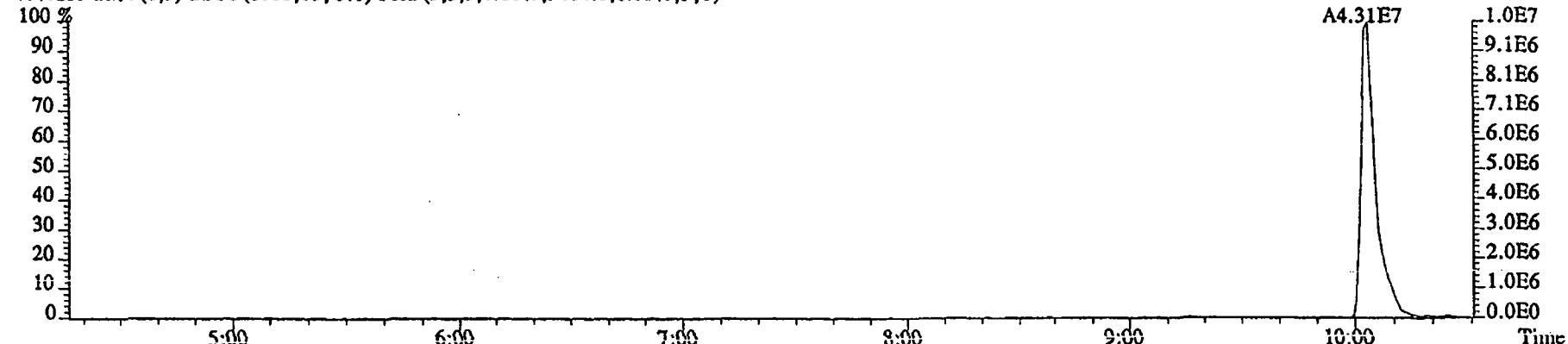
File:08DE045SP #1-462 Acq: 8-DEC-2004 16:31:35 GC EI+ Voltage SIR 70SE
 Sample#1 Text:ST1208 :CS1 2350-68A Exp:NDMAVOA
 75.0002 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,57728.0,1.00%,F,T)



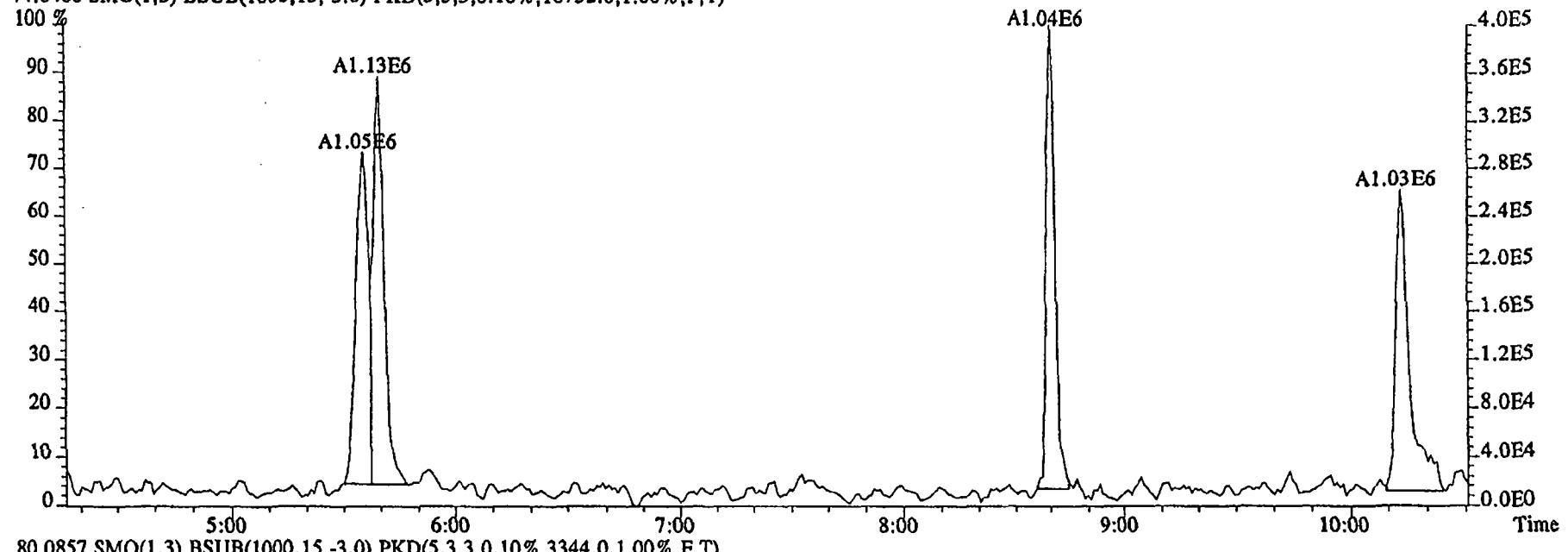
76.9972 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,7668.0,1.00%,F,T)



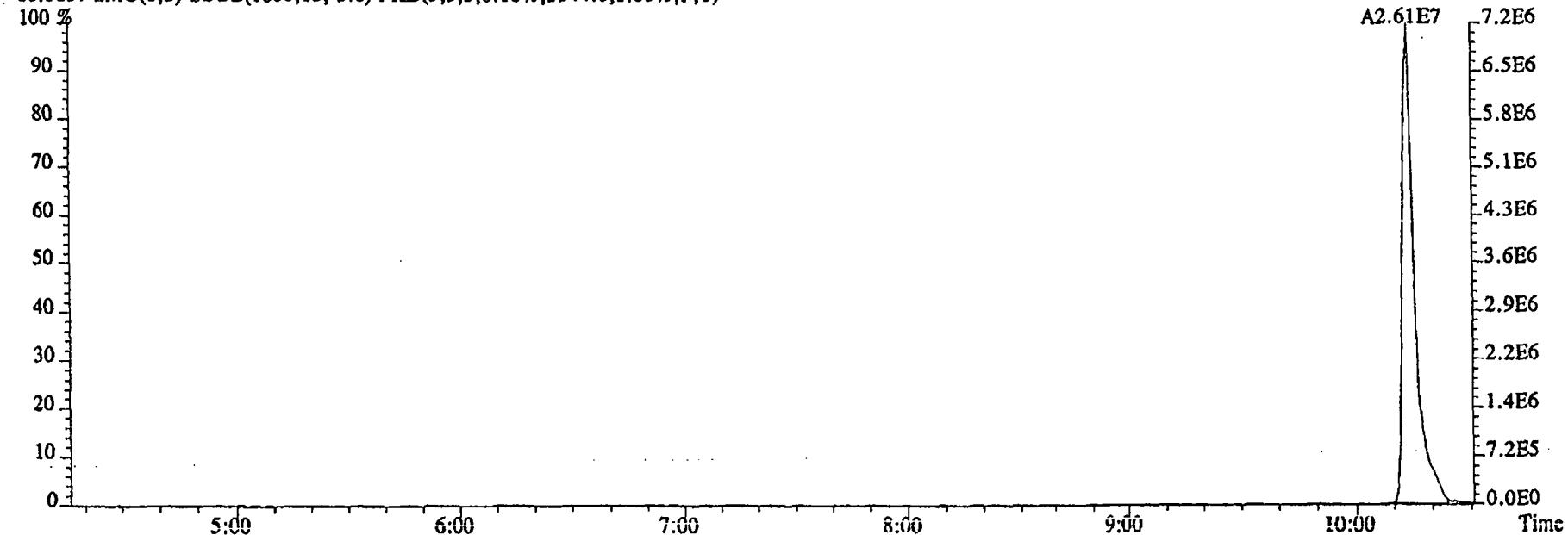
79.0253 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,5464.0,1.00%,F,T)



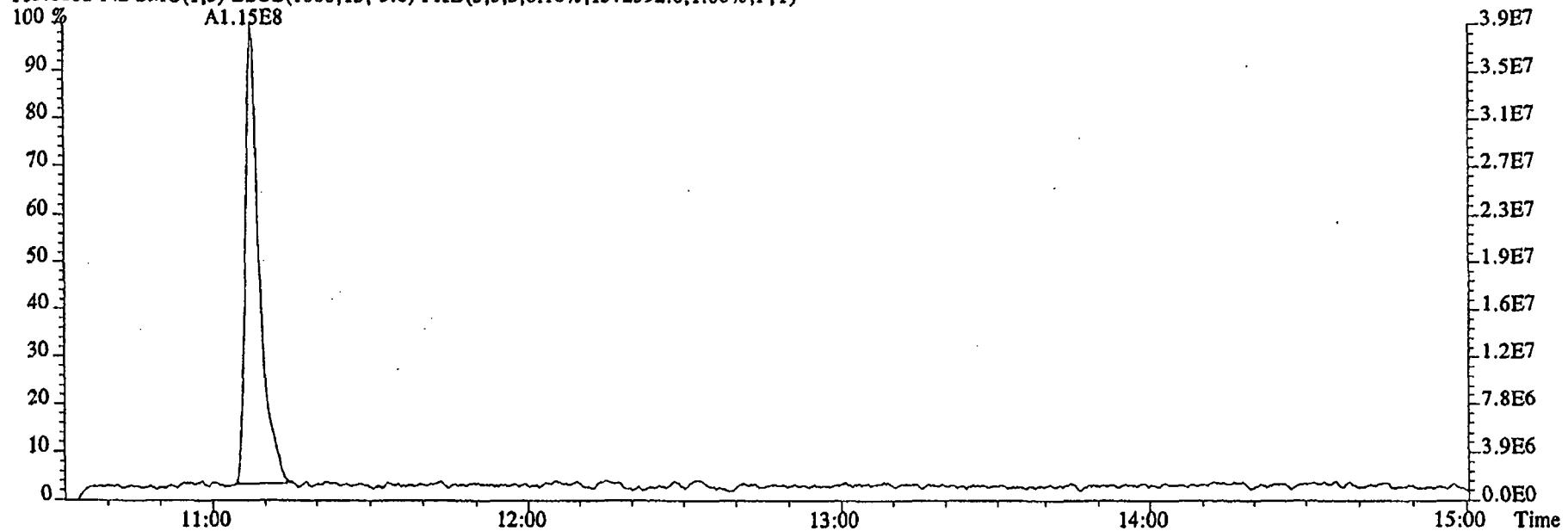
File:08DE045SP #1-462 Acq: 8-DEC-2004 16:31:35 GC EI+ Voltage SIR 70SE
Sample#1 Text:ST1208 :CS1 2350-68A Exp:NDMAVOA
74.0480 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,16732.0,1.00%,F,T)



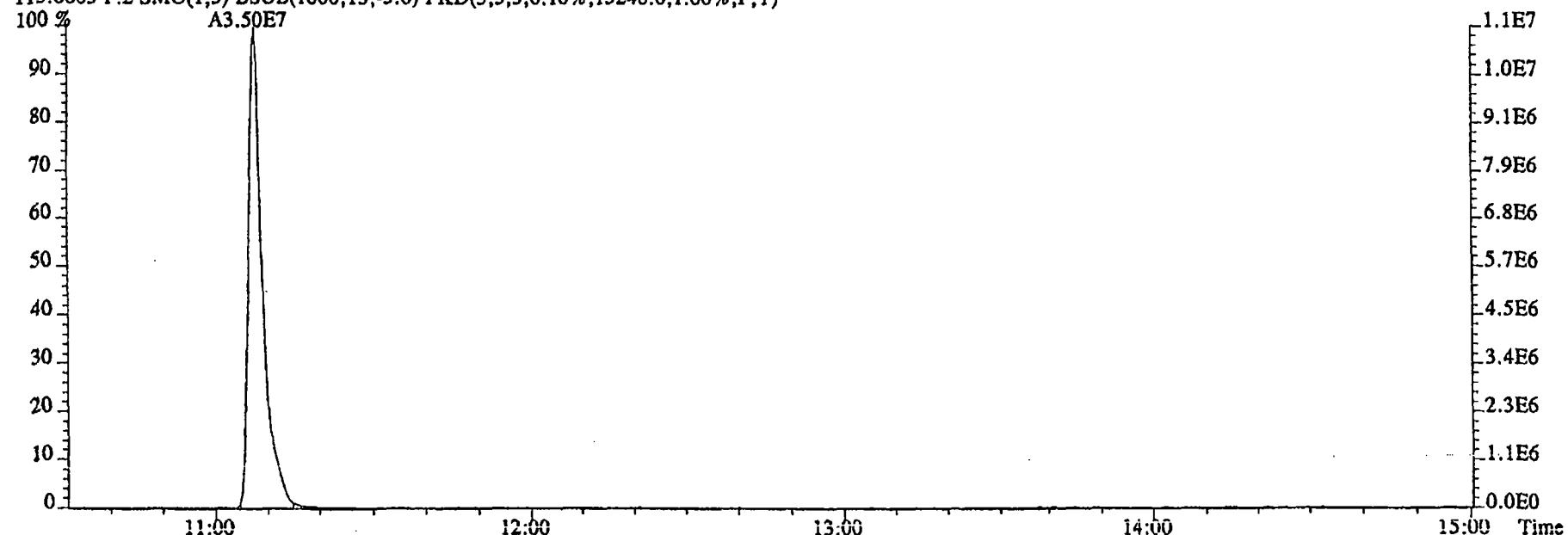
80.0857 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,3344.0,1.00%,F,T)



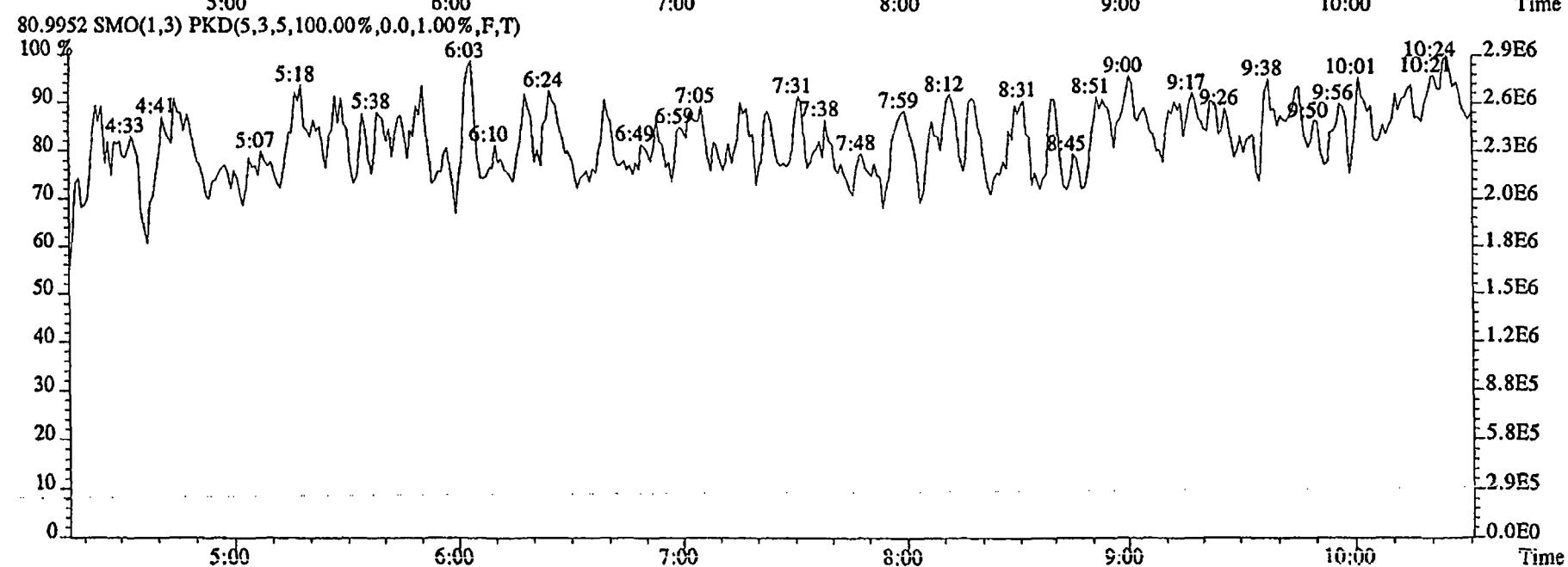
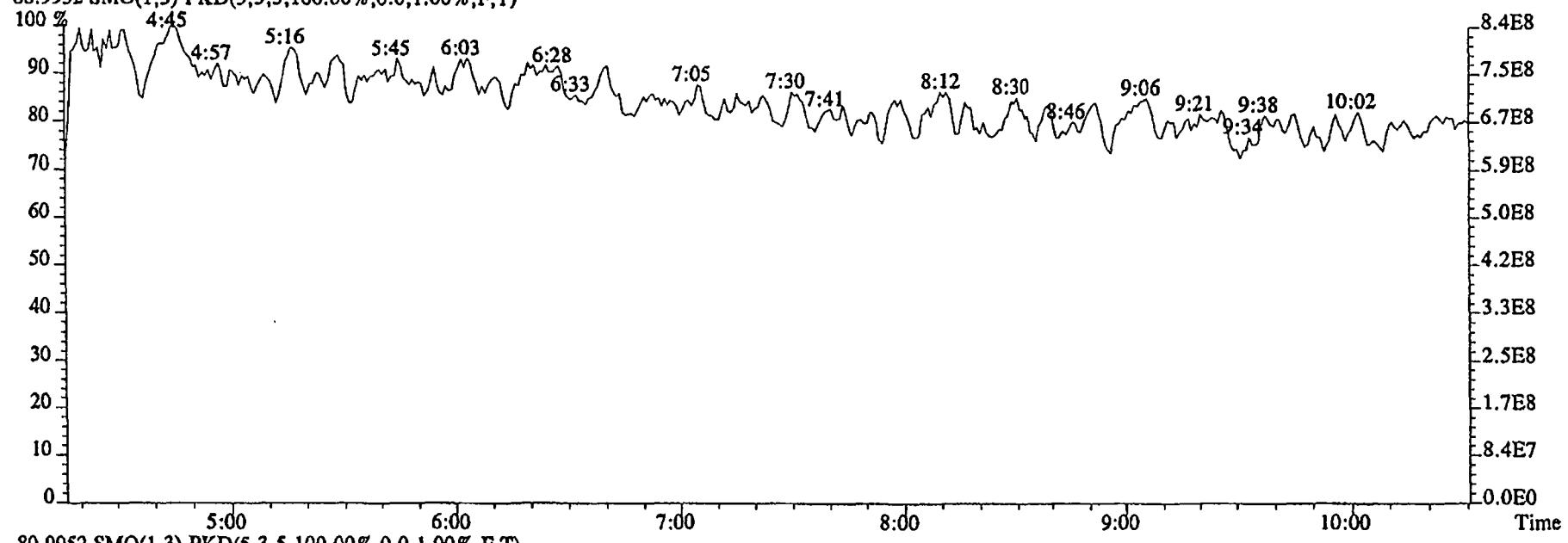
File:08DE045SP #1-626 Acq: 8-DEC-2004 16:31:35 GC El+ Voltage SIR 70SE
Sample#1 Text:ST1208 :CS1 2350-68A Exp:NDMAVOA
113.0032 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,1572592.0,1.00%,F,T)



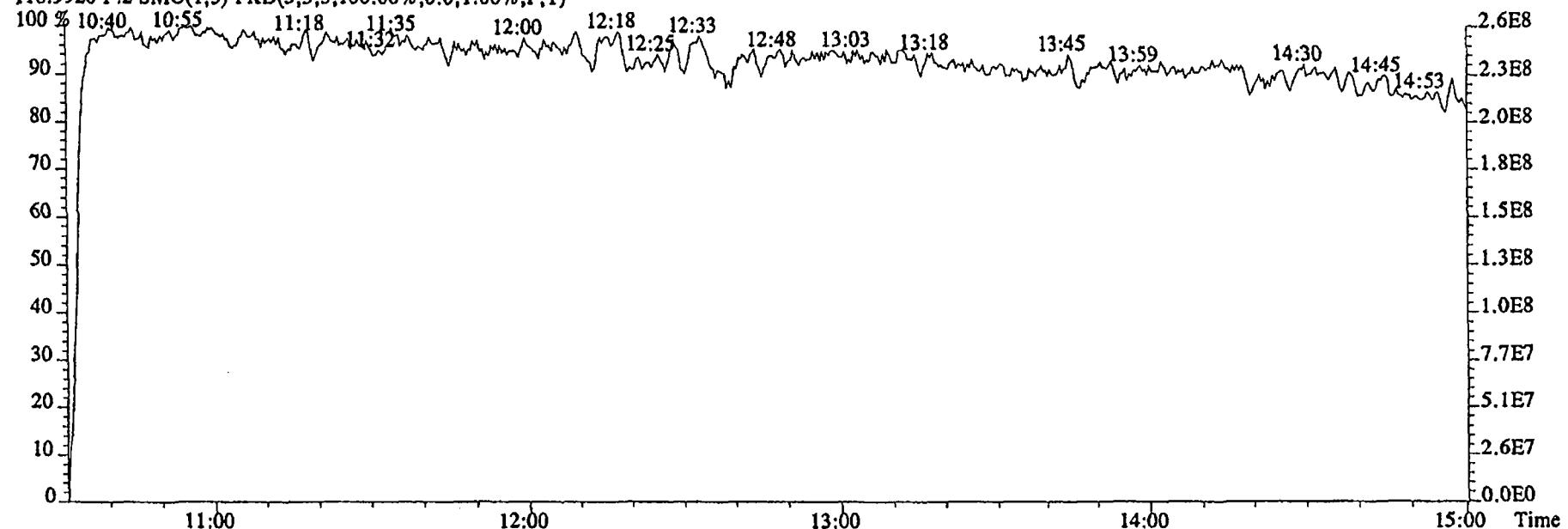
115.0003 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,15248.0,1.00%,F,T)



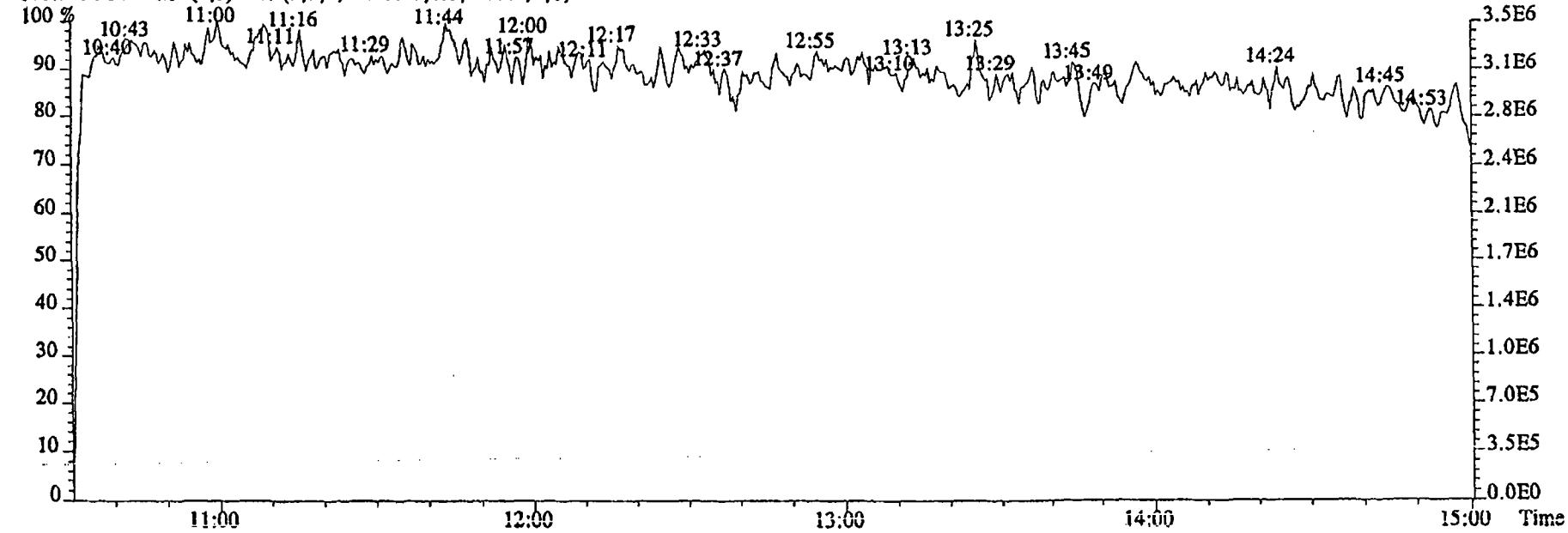
File:08DE045SP #1-462 Acq: 8-DEC-2004 16:31:35 GC EI+ Voltage SIR 70SE
 Sample#1 Text:ST1208 :CS1 2350-68A Exp:NDMAVOA
 68.9952 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



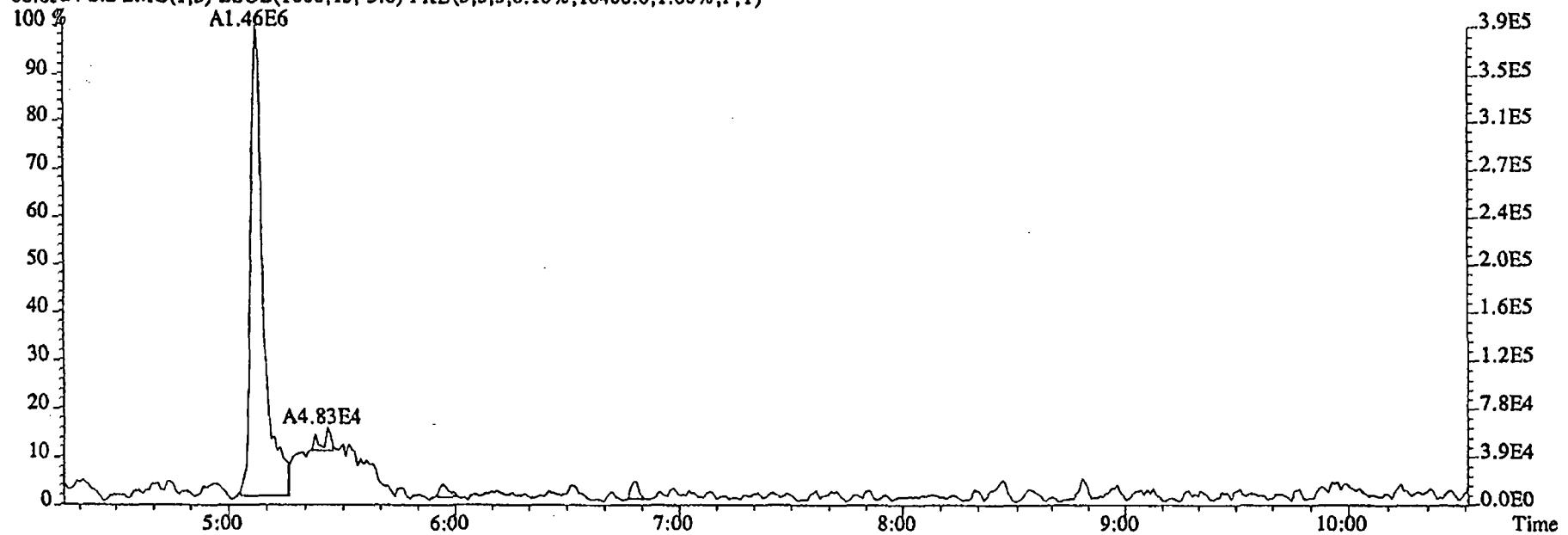
File:08DE045SP #1-626 Acq: 8-DEC-2004 16:31:35 GC EI+ Voltage SIR 70SE
Sample#1 Text:ST1208 :CS1 2350-68A Exp:NDMAVOA
118.9920 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



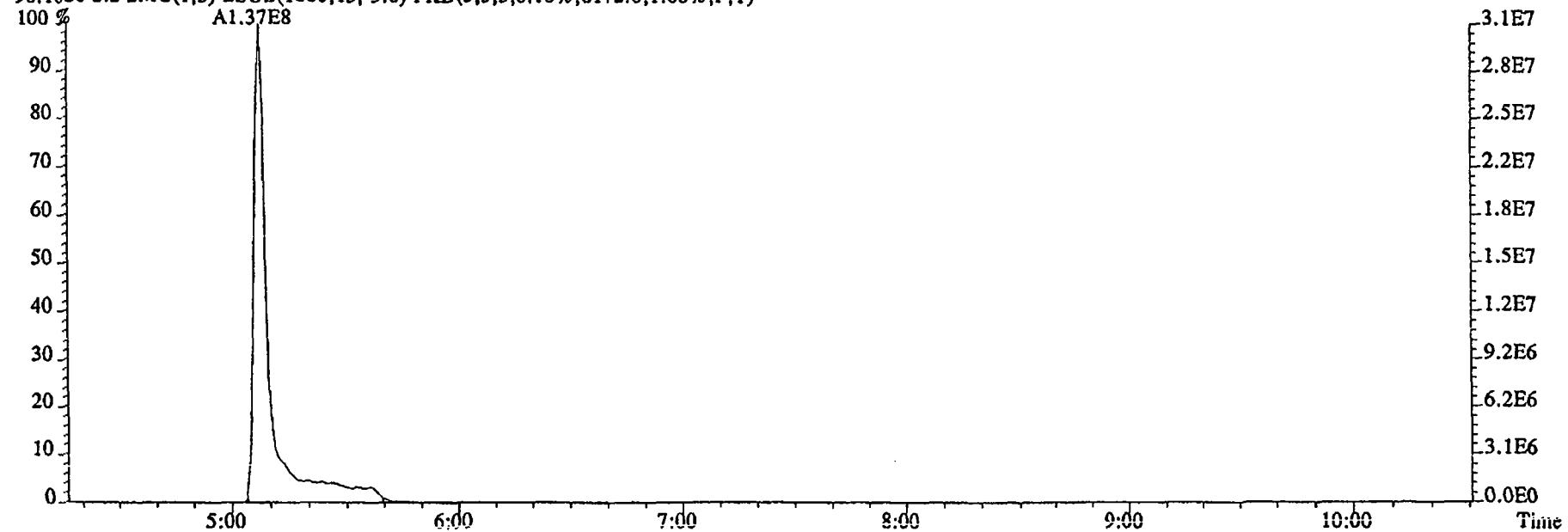
111.9936 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



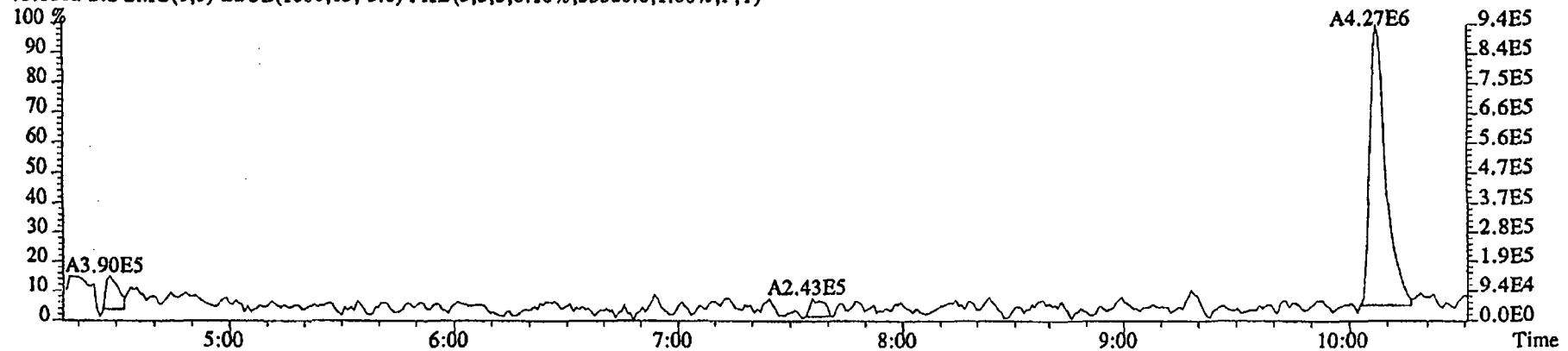
File:08DE045SP #1-462 Acq: 8-DEC-2004 16:51:55 GC EI+ Voltage SIR 70SE
Sample#2 Text:ST1208A :CS2 2350-68B Exp:NDMAVOA
88.0524 S:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,10400.0,1.00%,F,T)



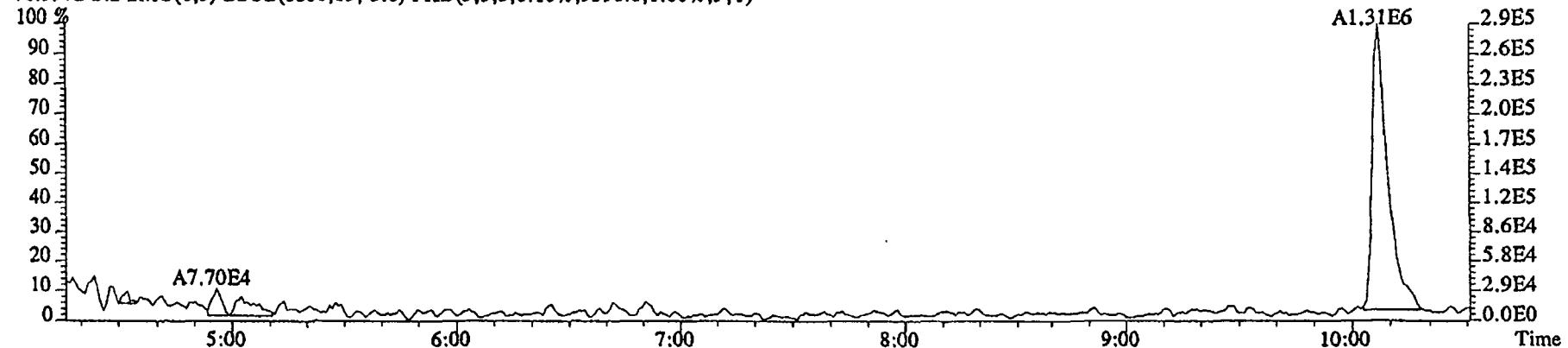
96.1026 S:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,6172.0,1.00%,F,T)



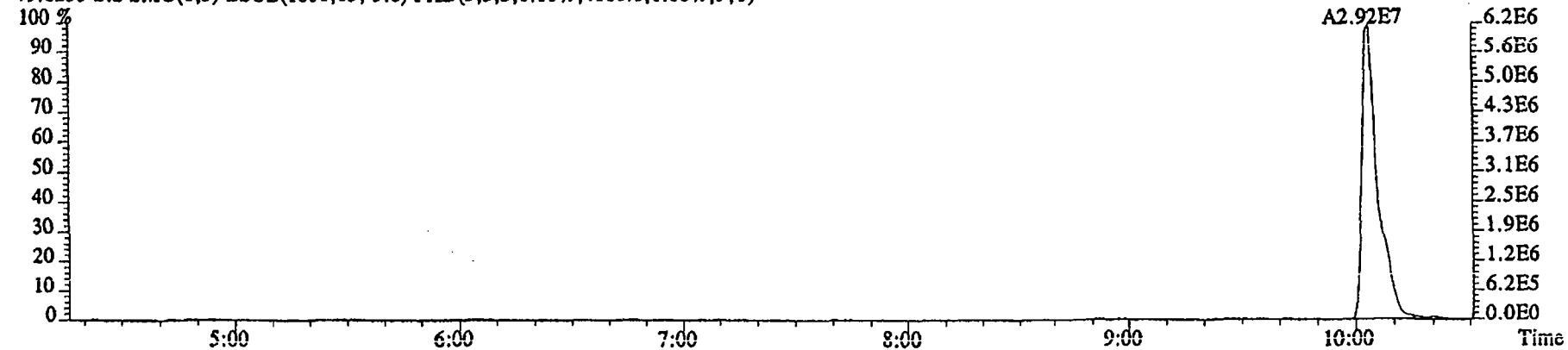
File:08DE04SSP #1-462 Acq: 8-DEC-2004 16:51:55 GC EI+ Voltage SIR 70SE
 Sample#2 Text:ST1208A :CS2 2350-68B Exp:NDMAVOA
 75.0002 S:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,55380.0,1.00%,F,T)



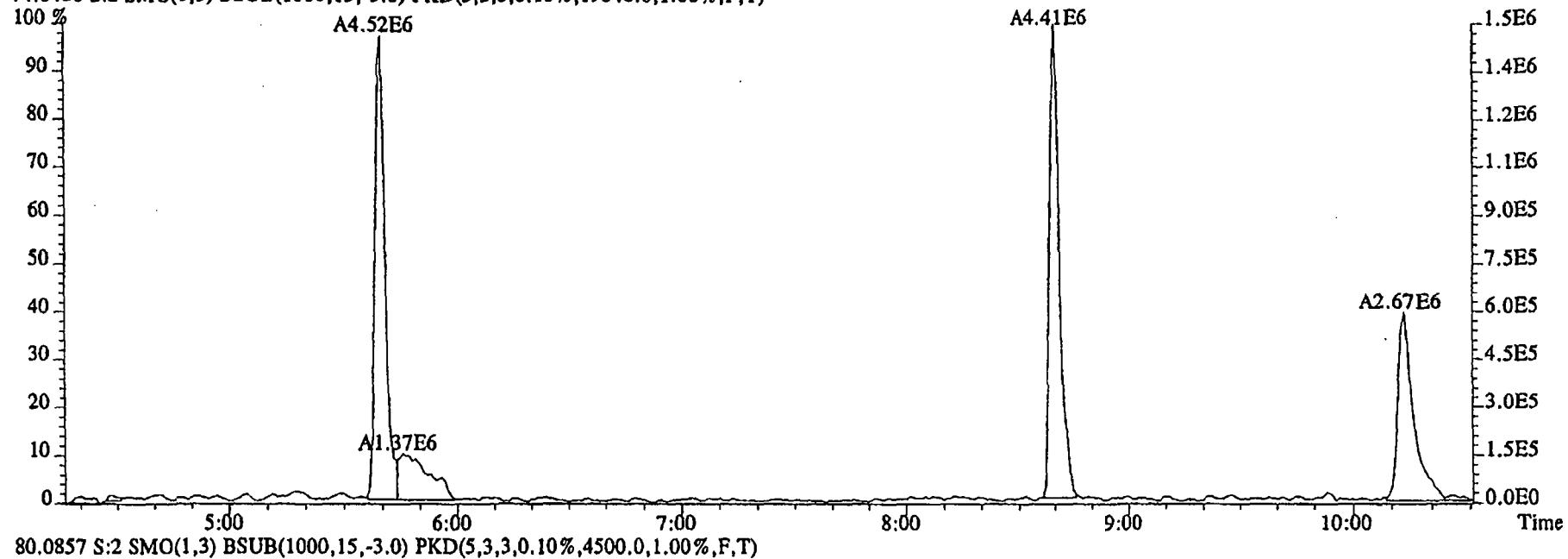
76.9972 S:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,9396.0,1.00%,F,T)



79.0253 S:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,4116.0,1.00%,F,T)

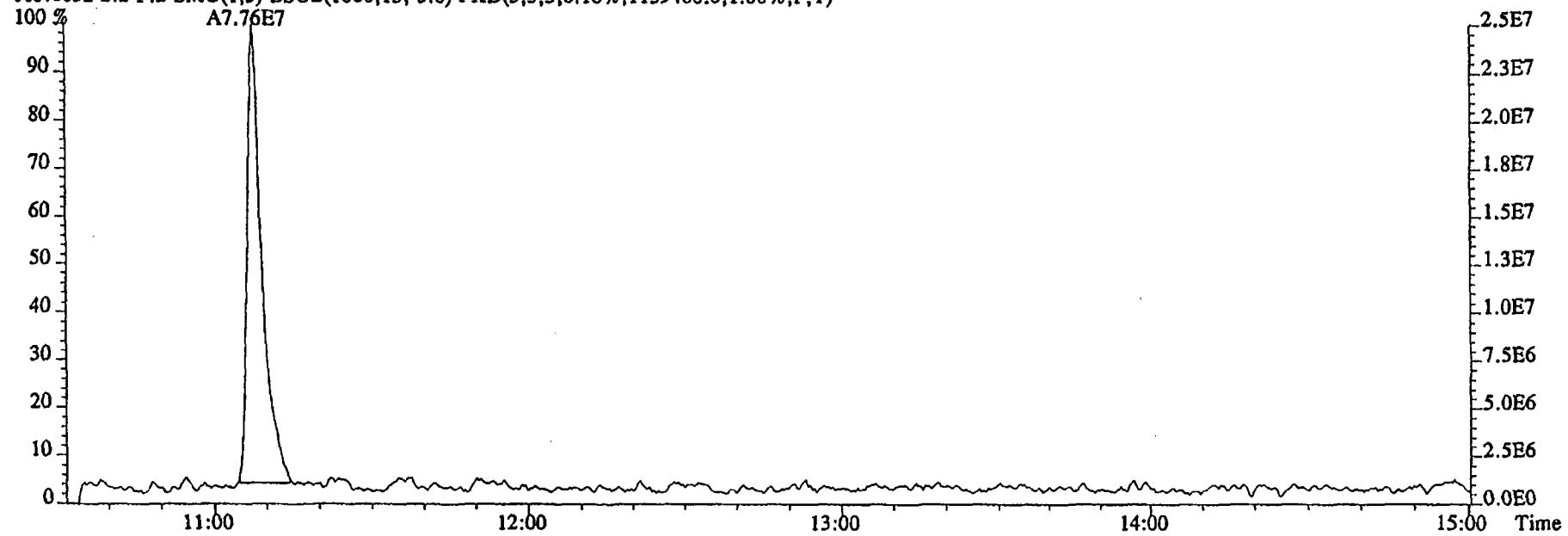


File:08DE045SP #1-462 Acq: 8-DEC-2004 16:51:55 GC EI+ Voltage SIR 70SE
Sample#2 Text:ST1208A :CS2 2350-68B Exp:NDMAVOA
74.0480 S:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,19040.0,1.00%,F,T)

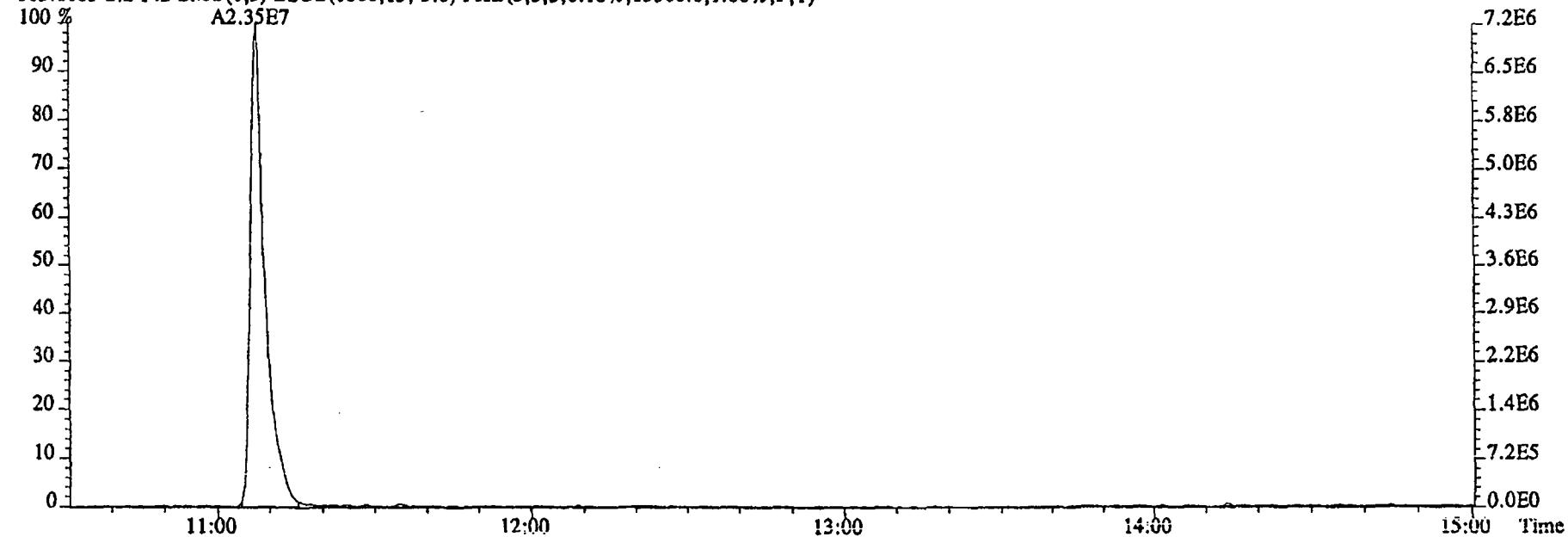


80.0857 S:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,4500.0,1.00%,F,T)

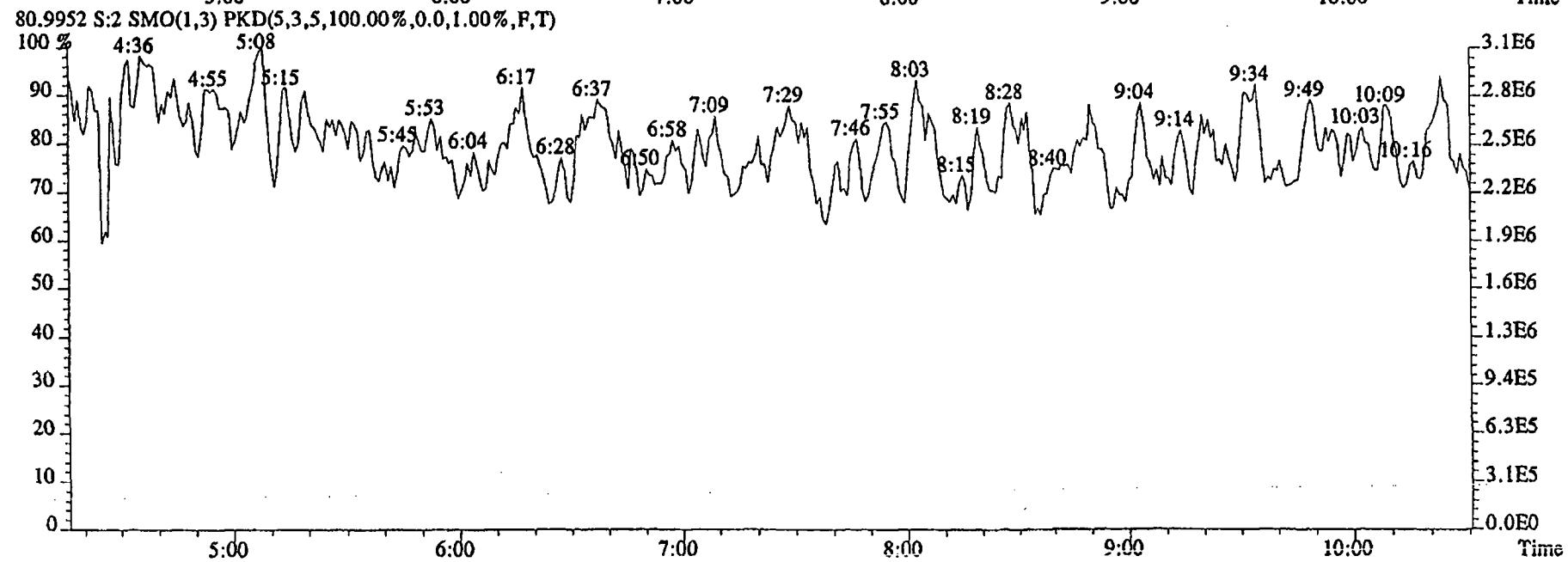
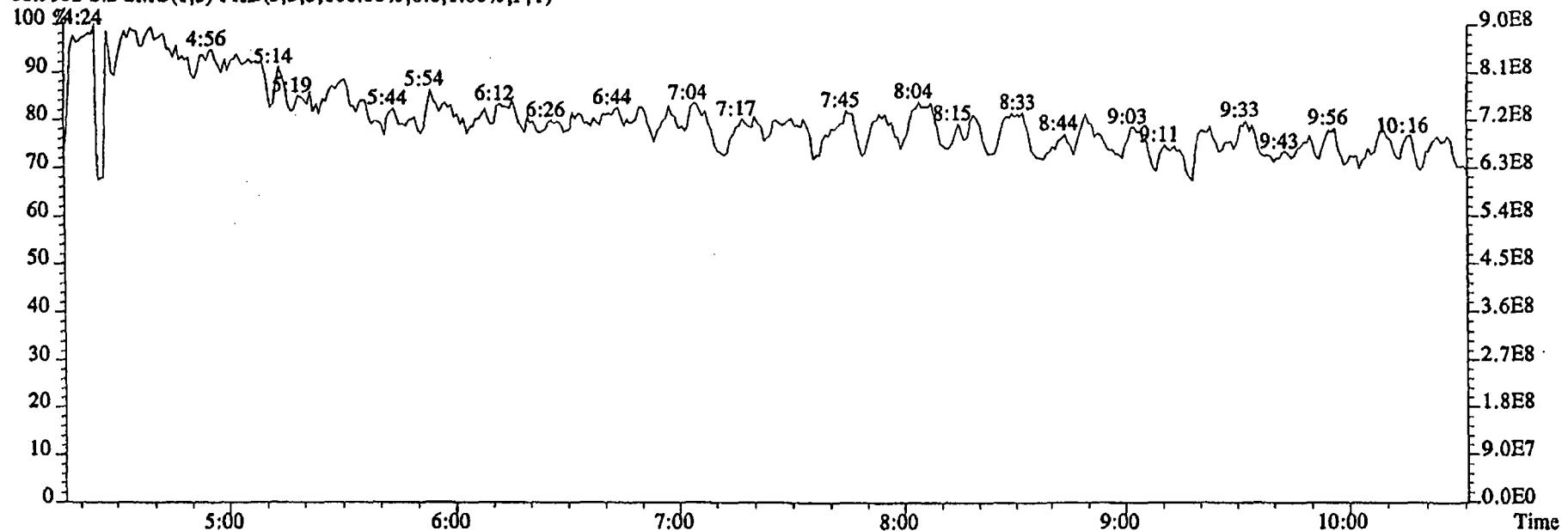
File:08DE045SP #1-626 Acq: 8-DEC-2004 16:51:55 GC EI+ Voltage SIR 70SE
Sample#2 Text:ST1208A :CS2 2350-68B Exp:NDMAVOA
113.0032 S:2 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,1139400.0,1.00%,F,T)



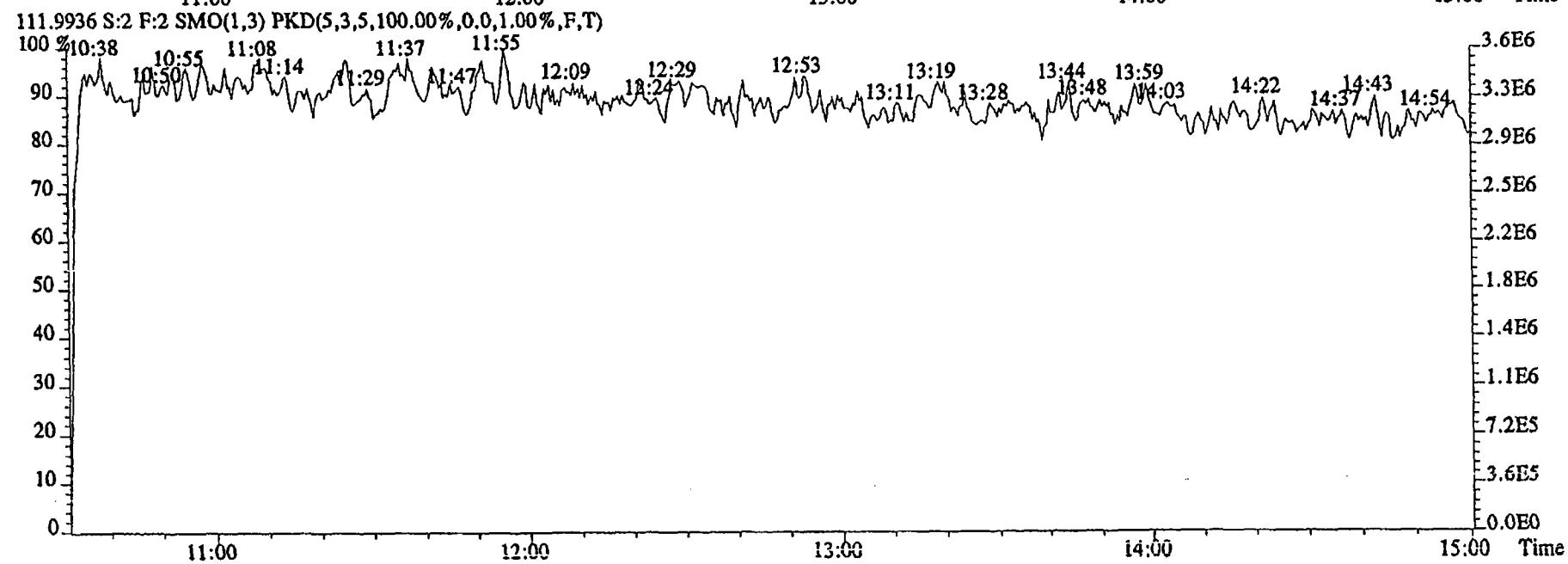
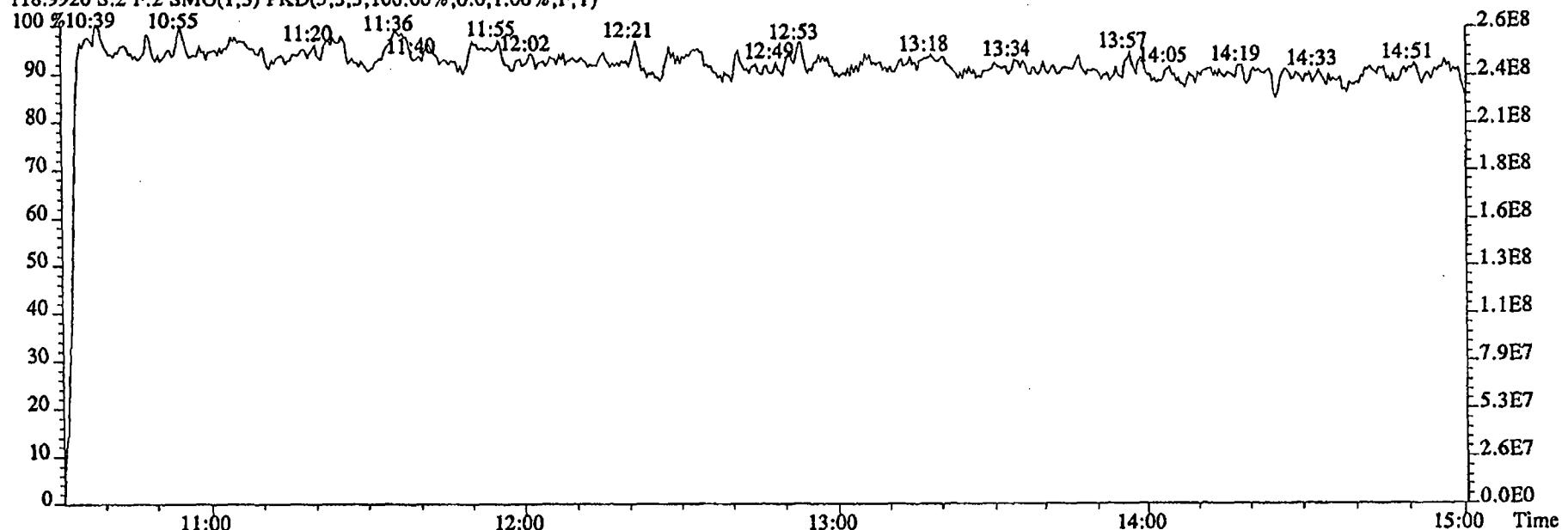
115.0003 S:2 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,15560.0,1.00%,F,T)



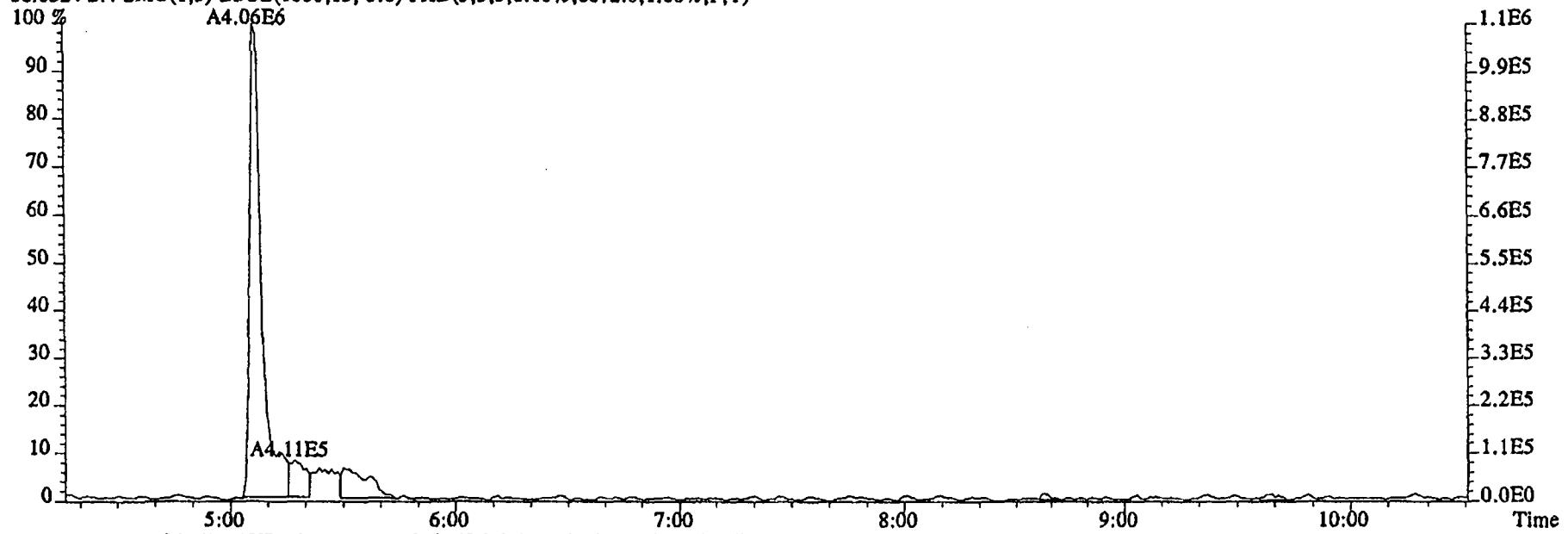
File:08DE045SP #1-462 Acq: 8-DEC-2004 16:51:55 GC EI+ Voltage SIR 70SE
 Sample#2 Text:ST1208A :CS2 2350-68B Exp:NDMAVOA
 68.9952 S:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



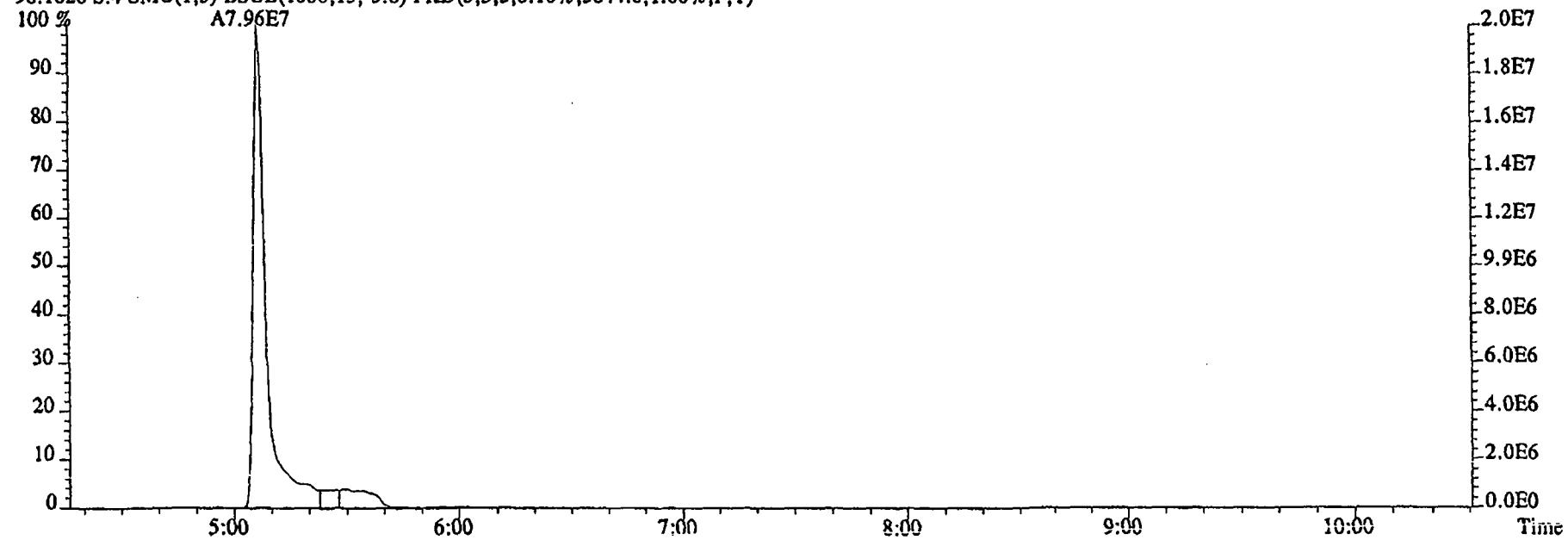
File:08DE045SP #1-626 Acq: 8-DEC-2004 16:51:55 GC EI+ Voltage SIR 70SE
 Sample#2 Text:ST1208A :CS2 2350-68B Exp:NDMAVOA
 118.9920 S:2 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



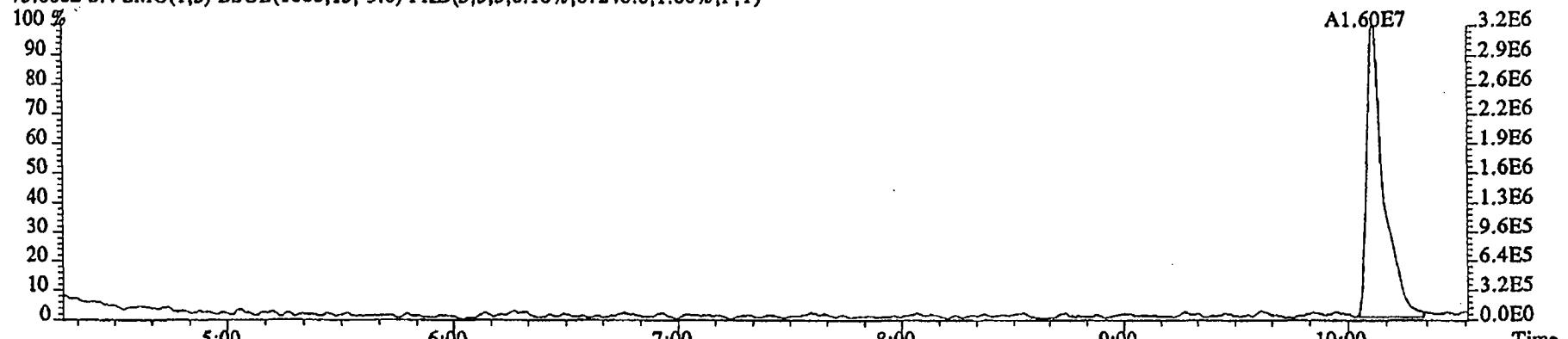
File:08DE04SSP #1-462 Acq: 8-DEC-2004 17:37:04 GC EI+ Voltage SIR 70SE
Sample#4 Text:ST1208C :CS3 2350-68C Exp:NDMAVOA
88.0524 S:4 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,8072.0,1.00%,F,T)



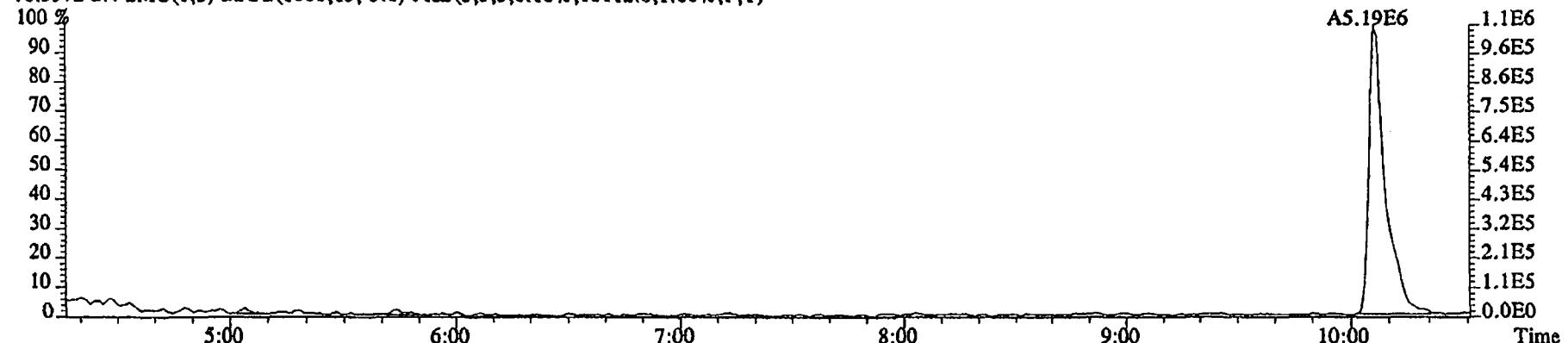
96.1026 S:4 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,5844.0,1.00%,F,T)



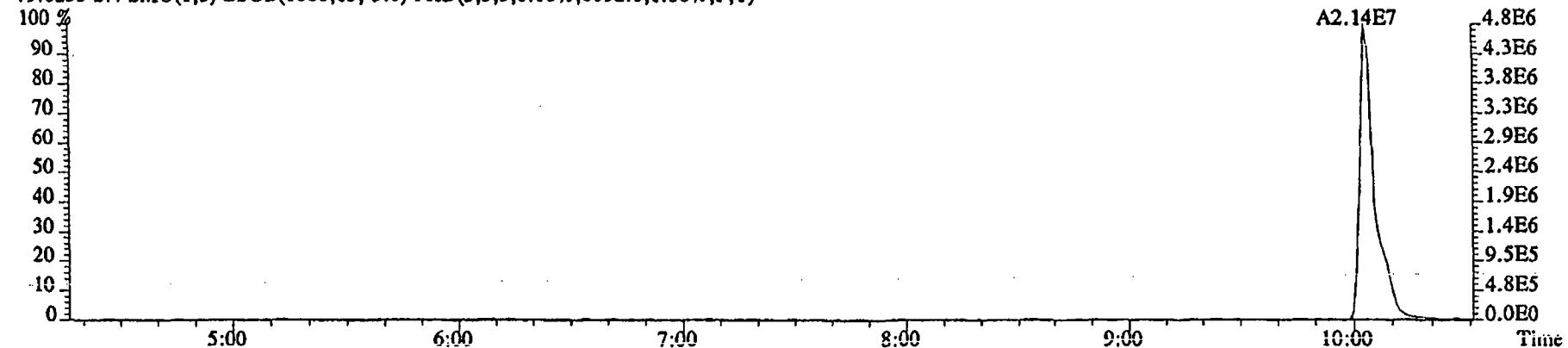
File:08DE045SP #1-462 Acq: 8-DEC-2004 17:37:04 GC EI+ Voltage SIR 70SE
Sample#4 Text:ST1208C :CS3 2350-68C Exp:NDMAVOA
75.0002 S:4 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,67240.0,1.00%,F,T)



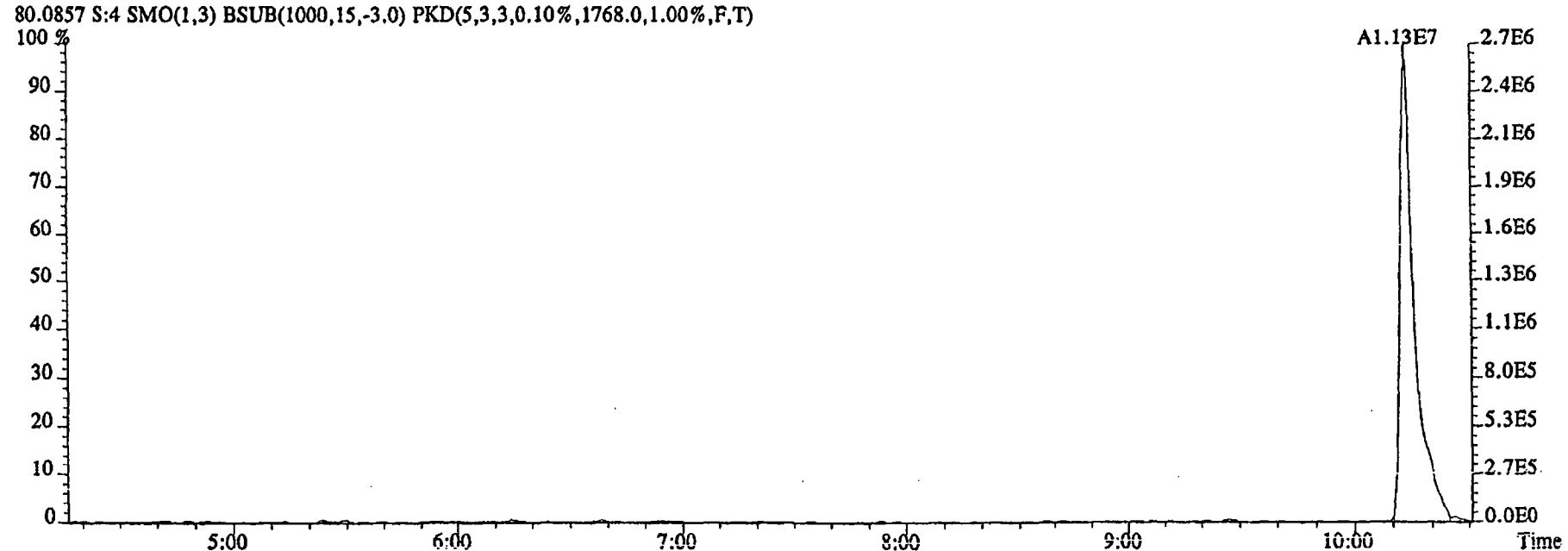
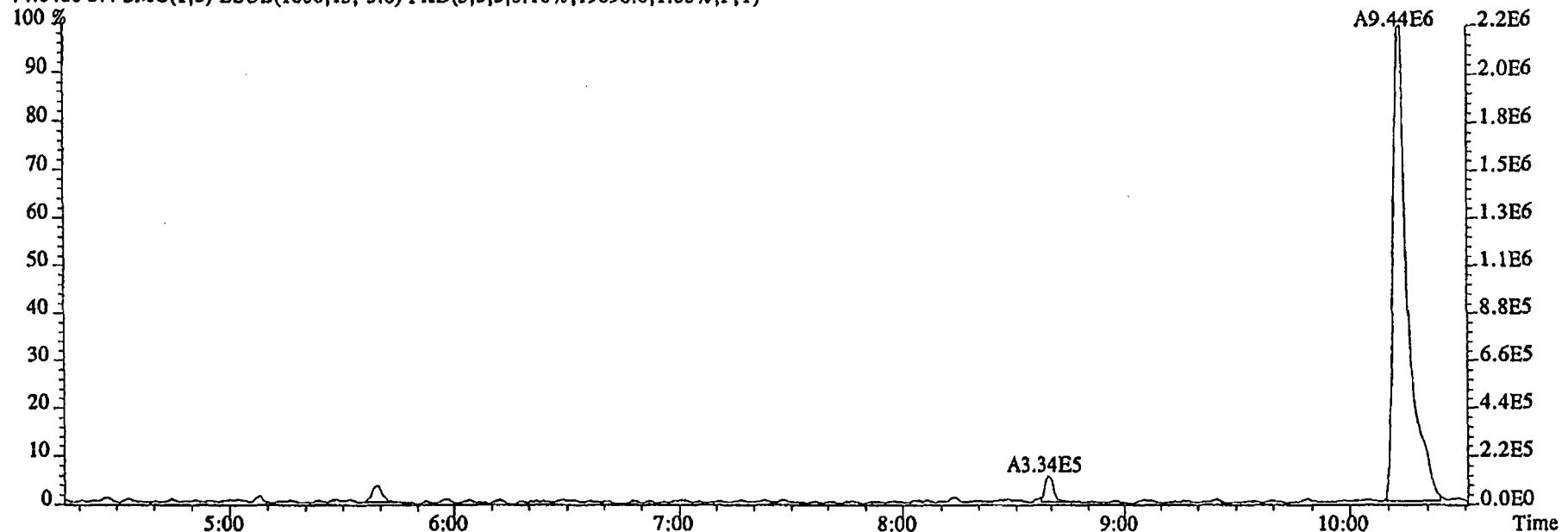
76.9972 S:4 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,10112.0,1.00%,F,T)



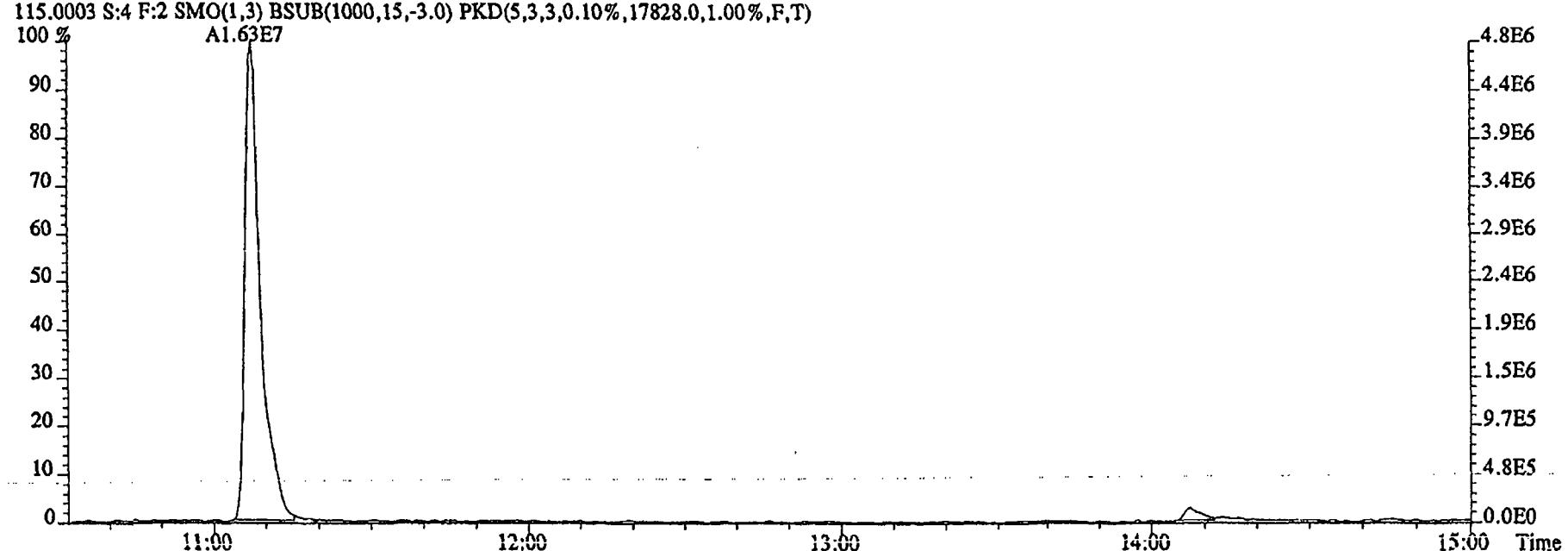
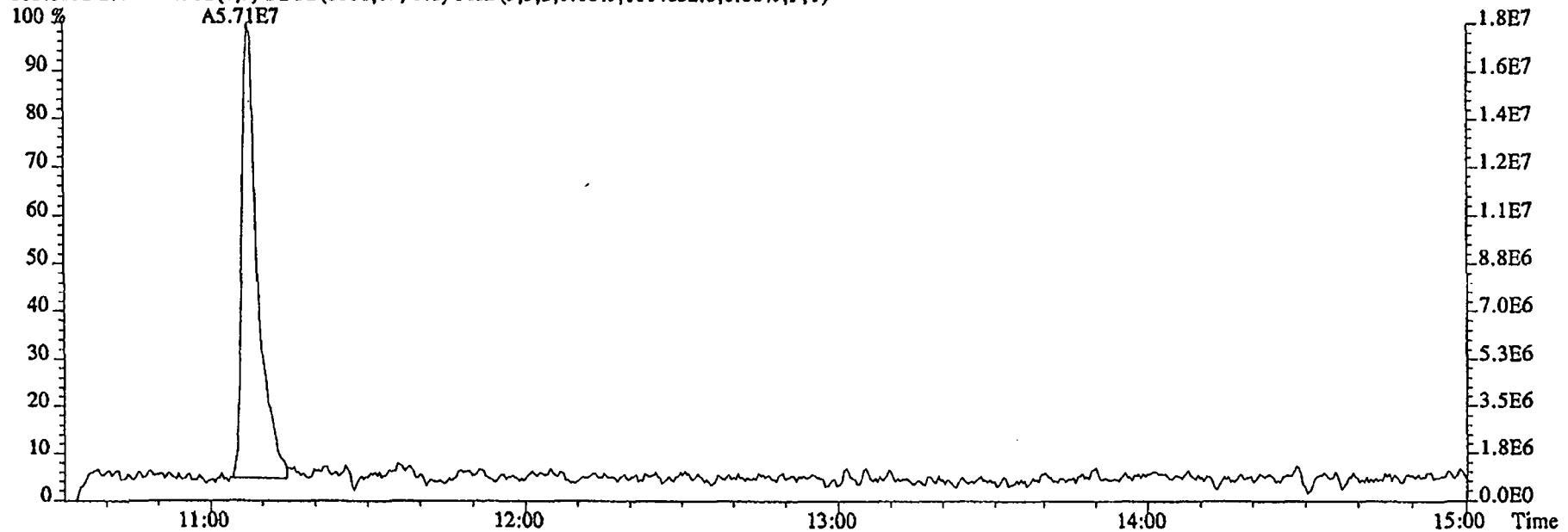
79.0253 S:4 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,6032.0,1.00%,F,T)



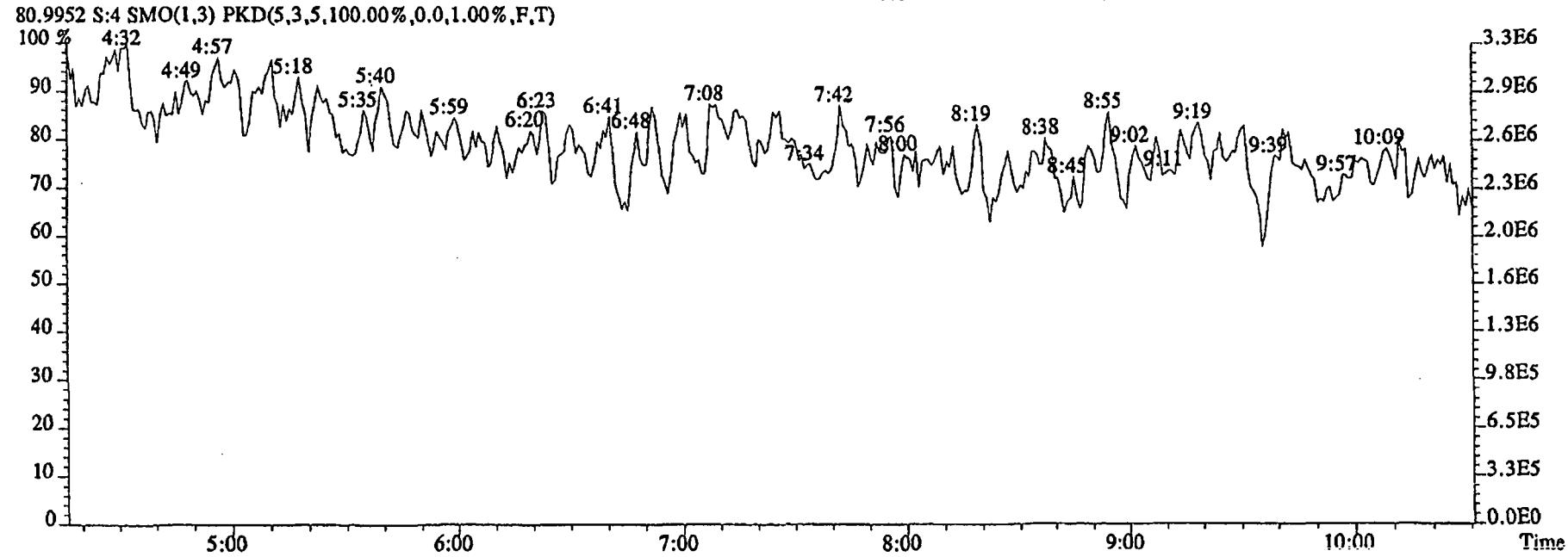
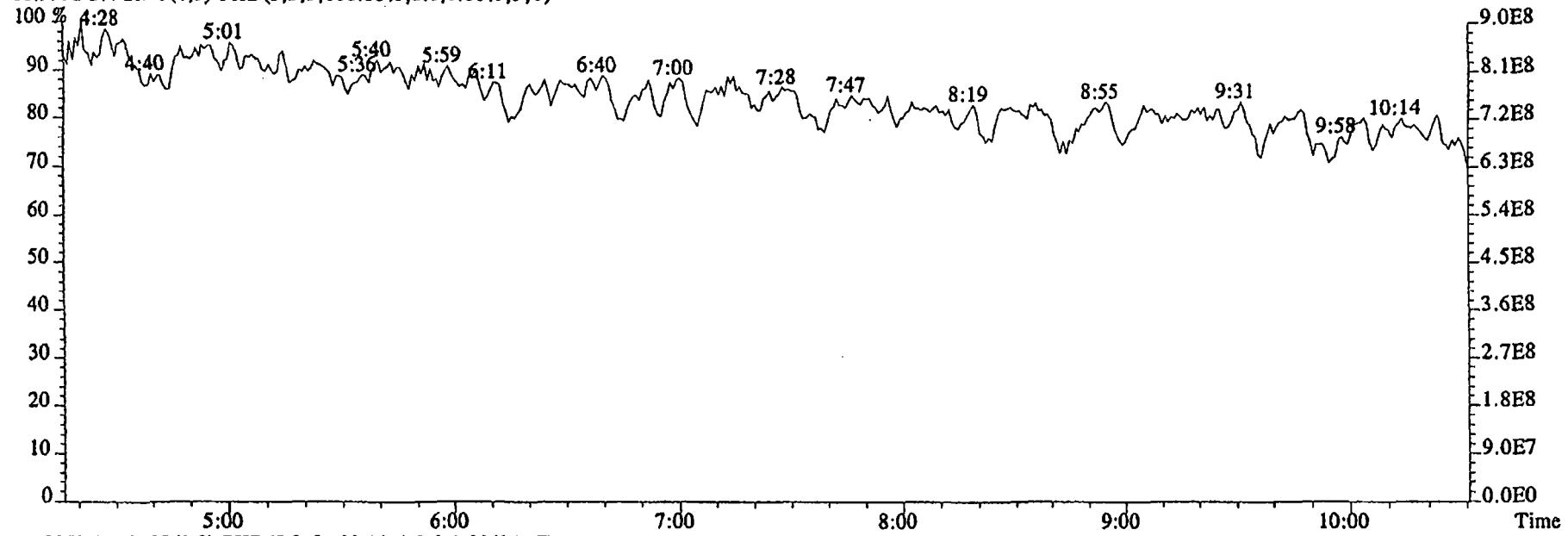
File:08DE045SP #1-462 Acq: 8-DEC-2004 17:37:04 GC EI+ Voltage SIR 70SE
Sample#4 Text:ST1208C :CS3 2350-68C Exp:NDMAVOA
74.0480 S:4 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,19096.0,1.00%,F,T)



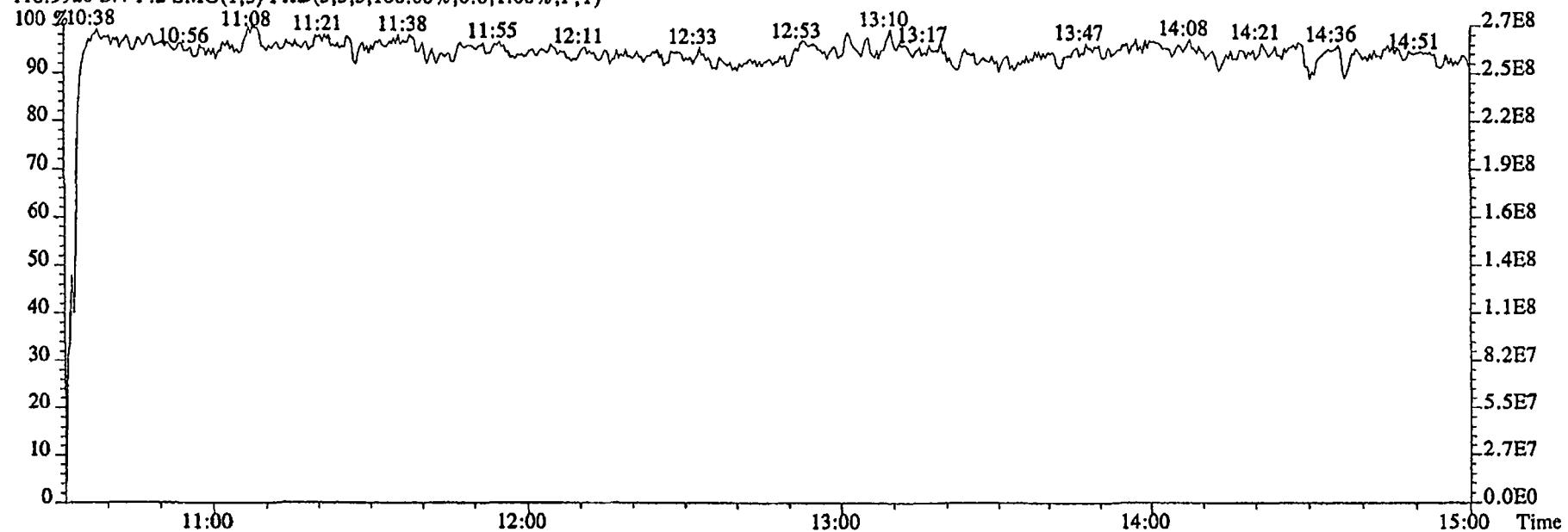
File:08DE045SP #1-625 Acq: 8-DEC-2004 17:37:04 GC EI+ Voltage SIR 70SE
Sample#4 Text:ST1208C :CS3 2350-68C Exp:NDMAVOA
113.0032 S:4 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(S,3,3,0.10%,1114852.0,1.00%,F,T)



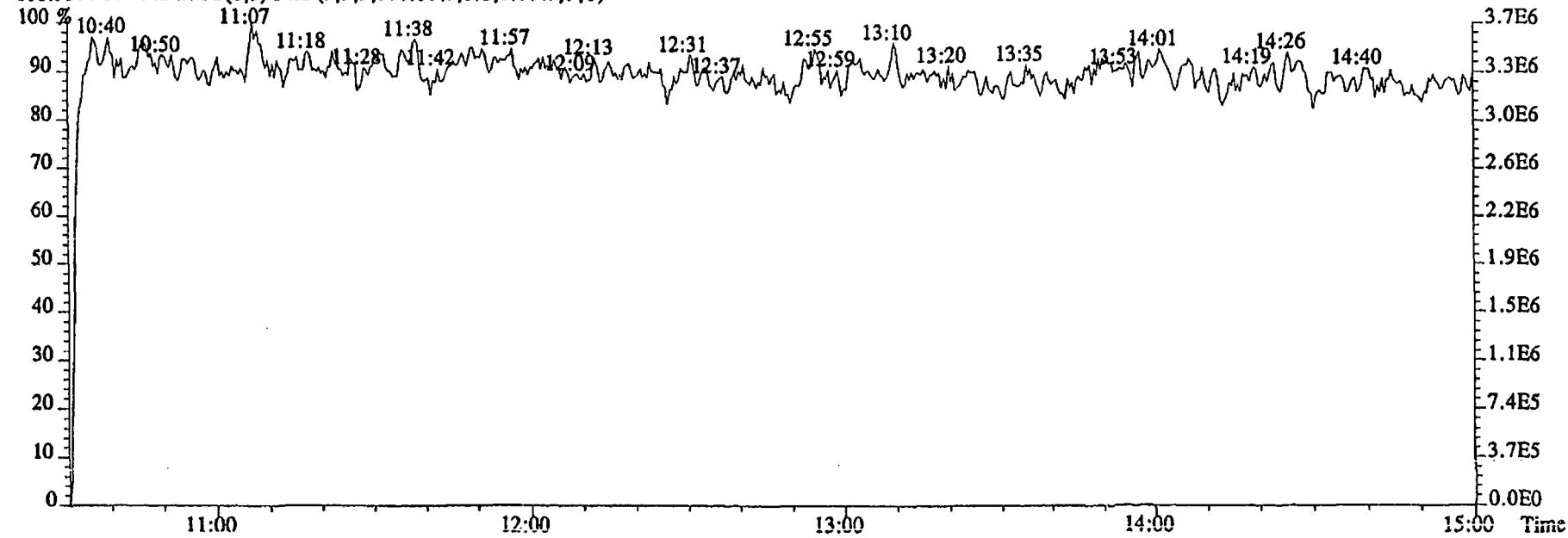
File:08DE045SP #1-462 Acq: 8-DEC-2004 17:37:04 GC EI+ Voltage SIR 70SE
 Sample#4 Text:ST1208C :CS3 2350-68C Exp:NDMAVOA
 68.9952 S:4 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



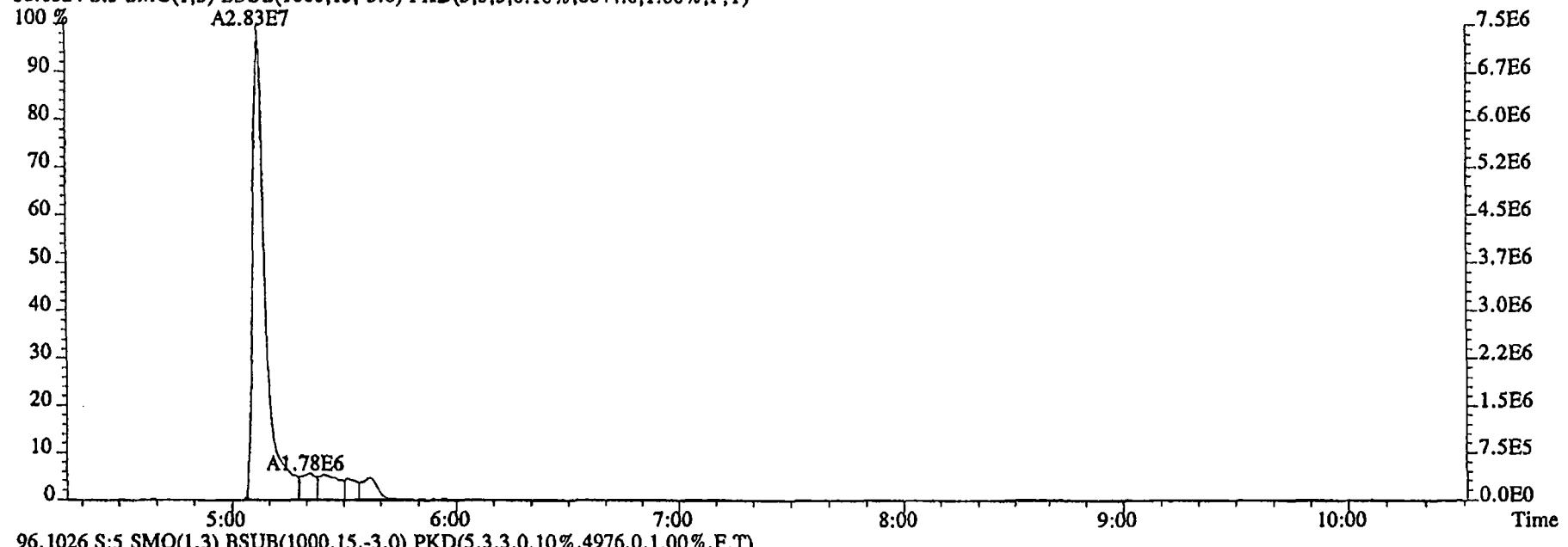
File:08DE045SP #1-625 Acq: 8-DEC-2004 17:37:04 GC EI+ Voltage SIR 70SE
Sample#4 Text:ST1208C :CS3 2350-68C Exp:NDMAVOA
118.9920 S:4 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



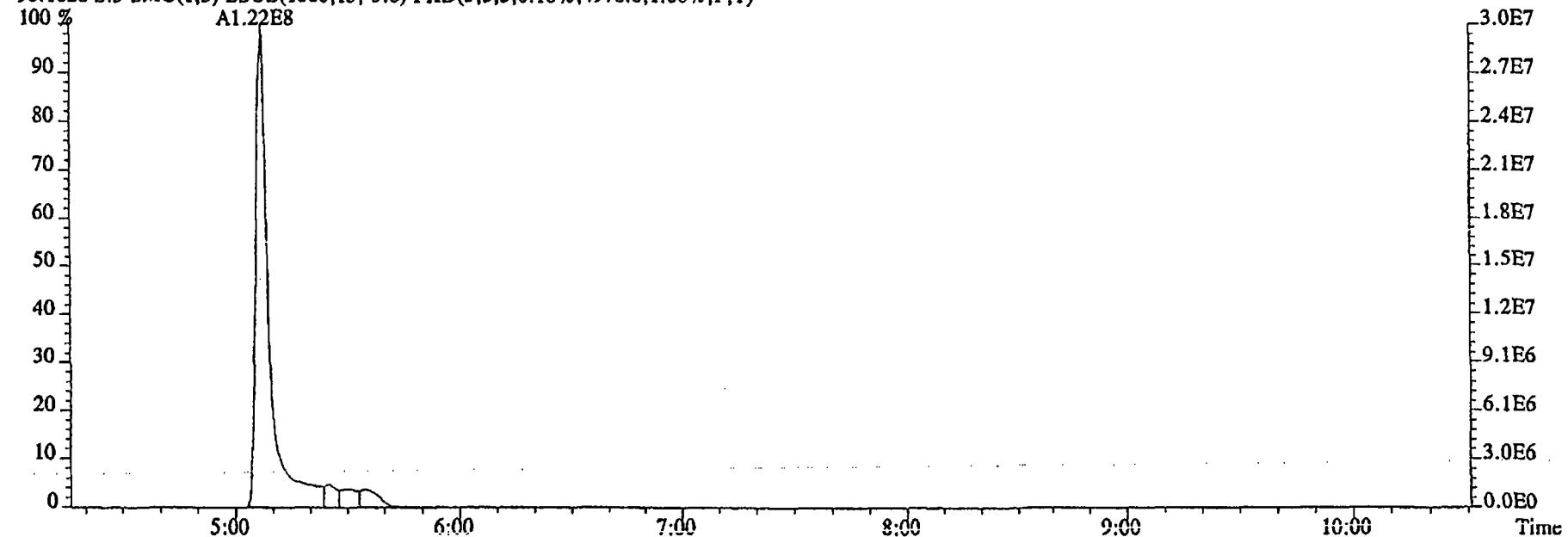
111.9936 S:4 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



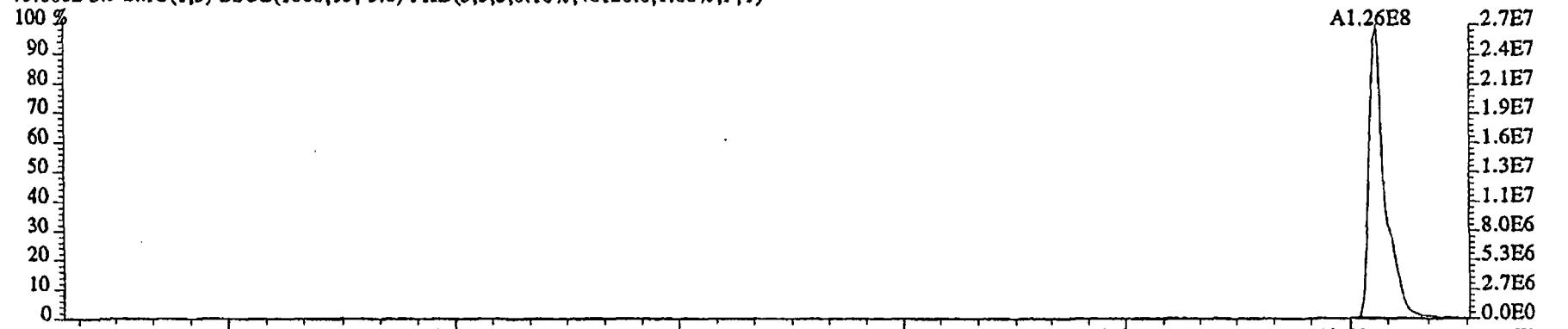
File:08DE045SP #1-462 Acq: 8-DEC-2004 17:57:28 GC EI+ Voltage SIR 70SE
Sample#5 Text:ST1208D CS4 2350-68D Exp:NDMAVOA
88.0524 S:5 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,8644.0,1.00%,F,T)



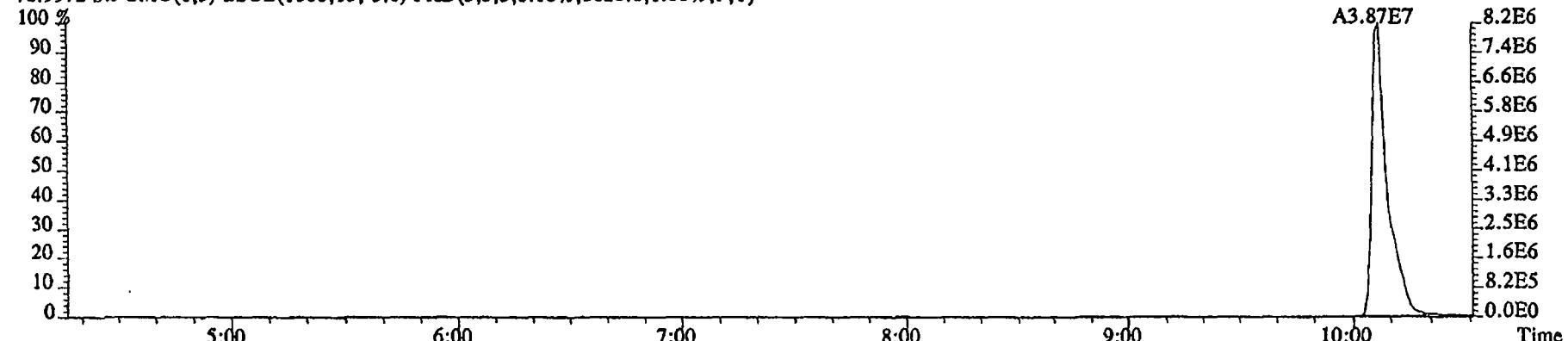
96.1026 S:5 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,4976.0,1.00%,F,T)



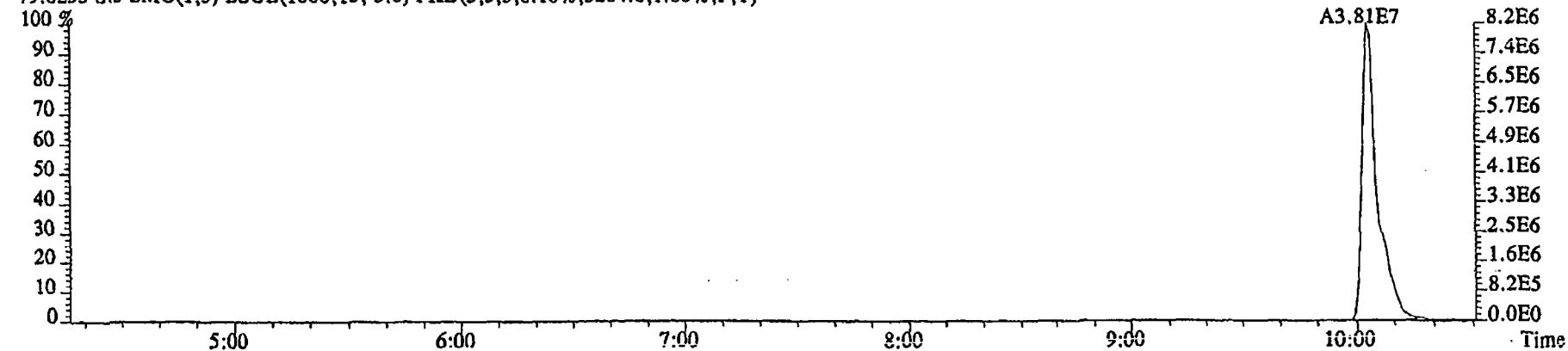
File:08DE045SP #1-462 Acq: 8-DEC-2004 17:57:28 GC EI+ Voltage SIR 70SE
Sample#5 Text:ST1208D :CS4 2350-68D Exp:NDMAVOA
75.0002 S:5 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,46120.0,1.00%,F,T)



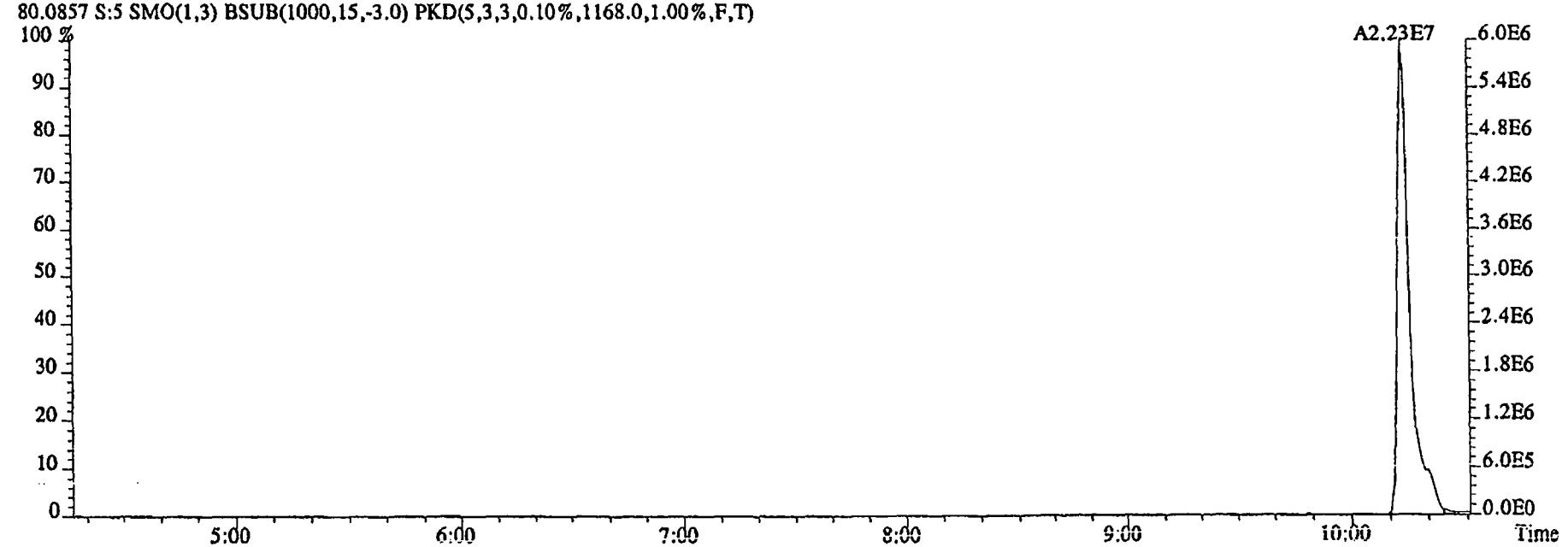
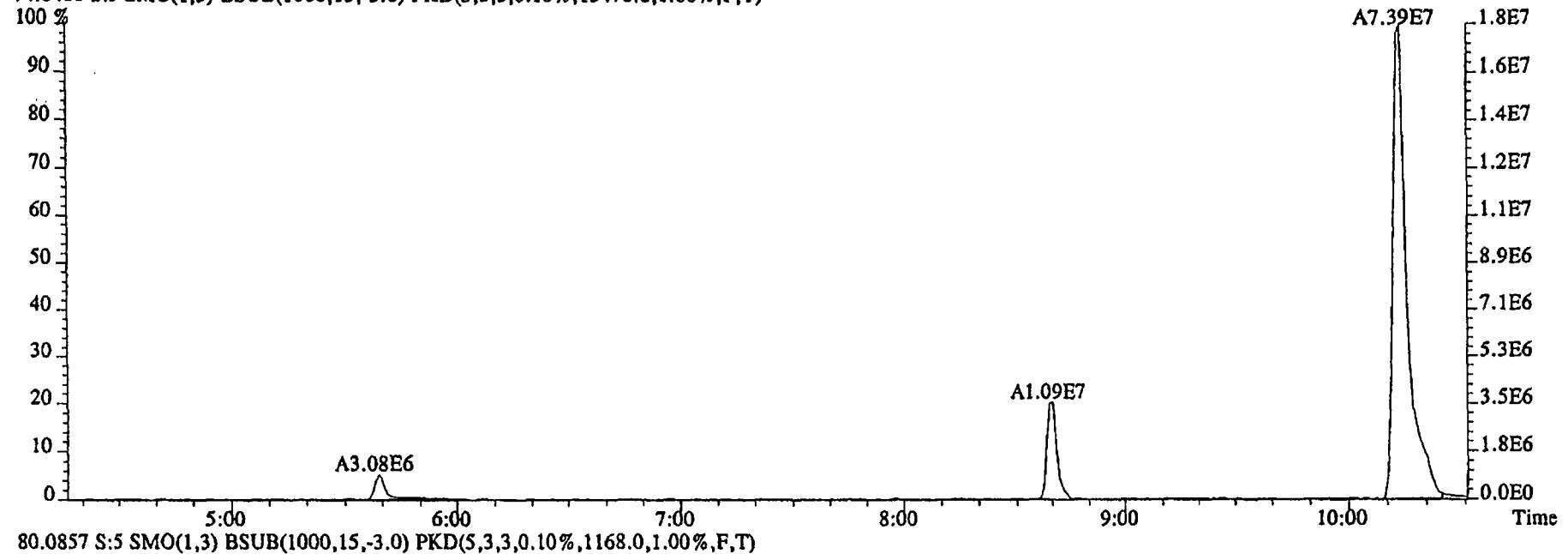
76.9972 S:5 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,6820.0,1.00%,F,T)



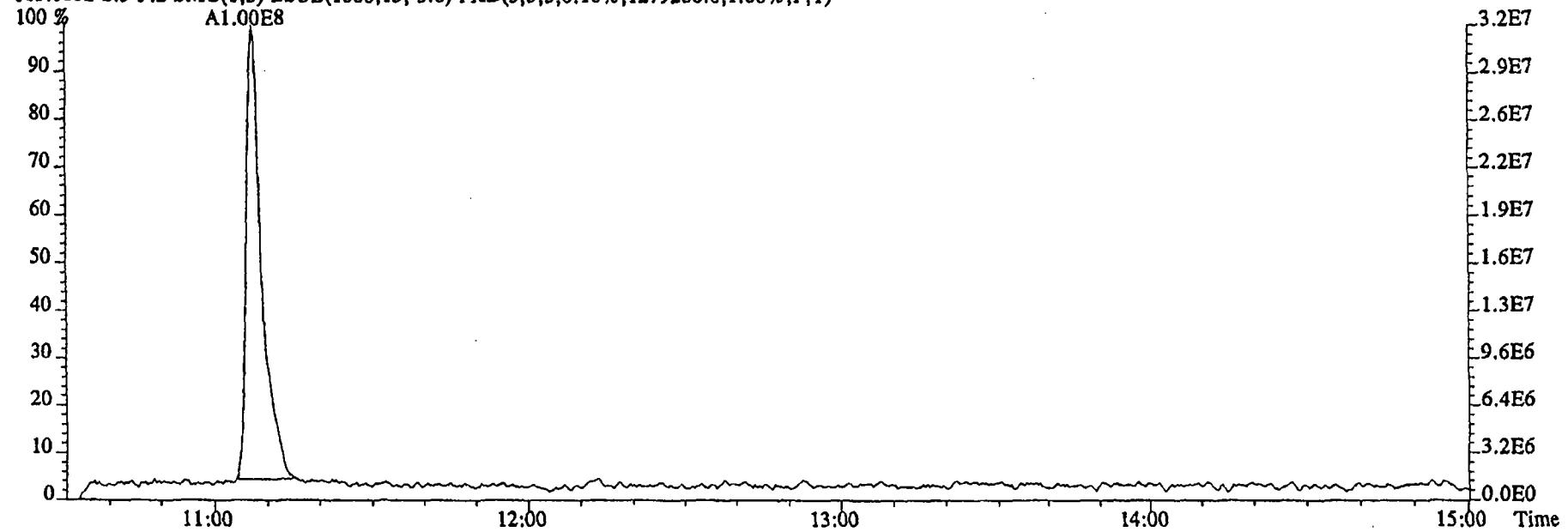
79.0253 S:5 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,3204.0,1.00%,F,T)



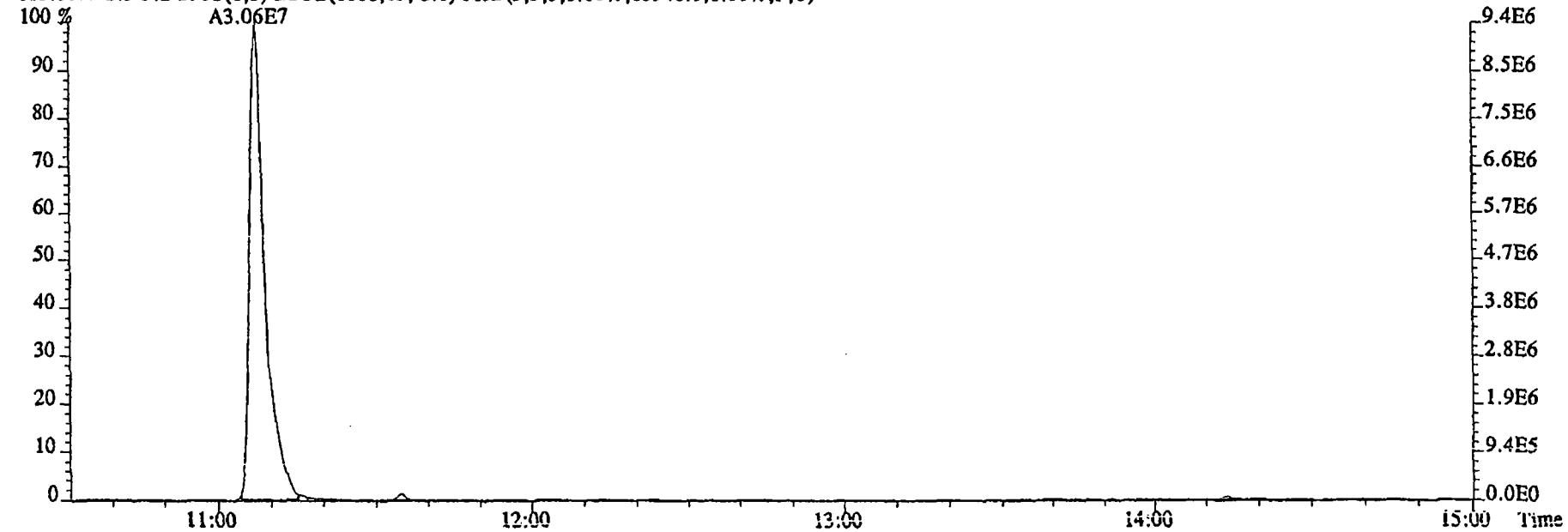
File:08DE045SP #1-462 Acq: 8-DEC-2004 17:57:28 GC EI+ Voltage SIR 70SE
 Sample#5 Text:ST1208D :CS4 2350-68D Exp:NDMAVÖA
 74.0480 S:5 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,13476.0,1.00%,F,T)



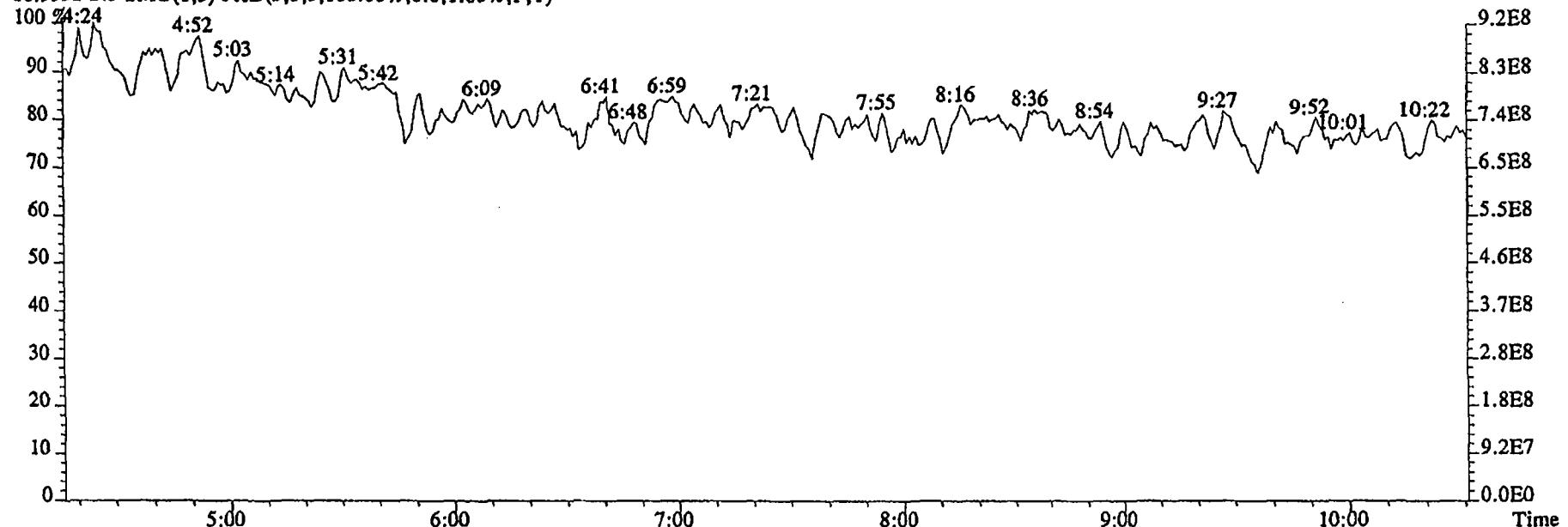
File:08DE045SP #1-625 Acq: 8-DEC-2004 17:57:28 GC EI+ Voltage SIR 70SE
Sample#5 Text:ST1208D :CS4 2350-68D Exp:NDMAVOA
113.0032 S:5 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,1279288.0,1.00%,F,T)



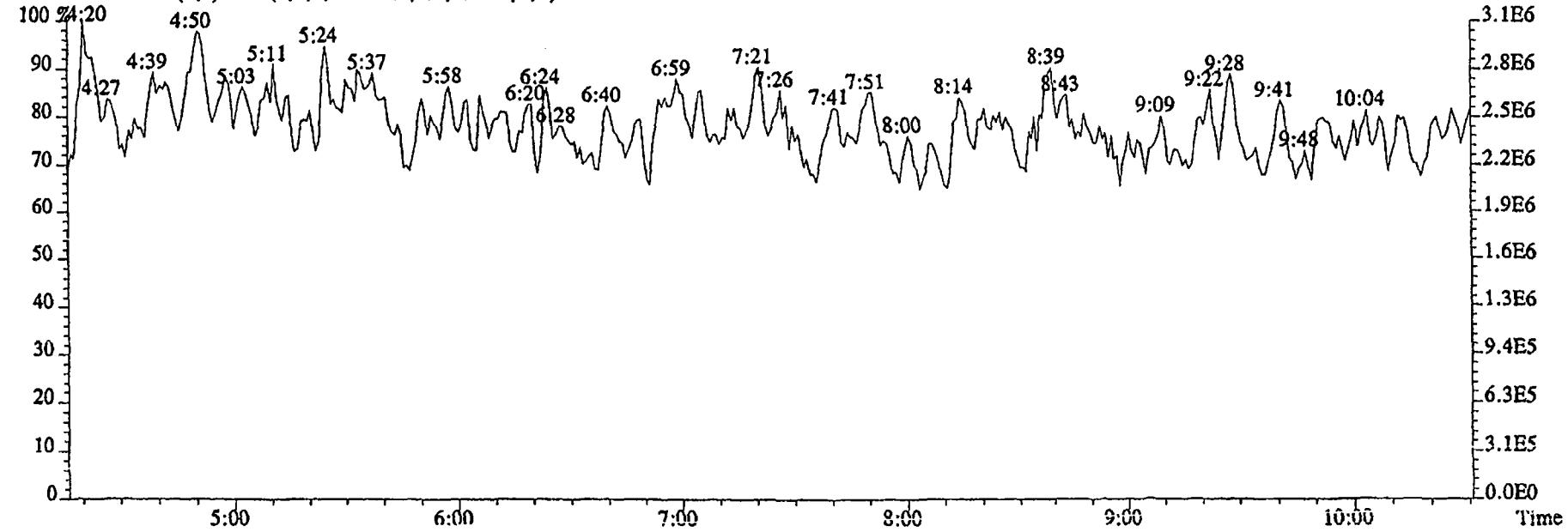
115.0003 S:5 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,13940.0,1.00%,F,T)



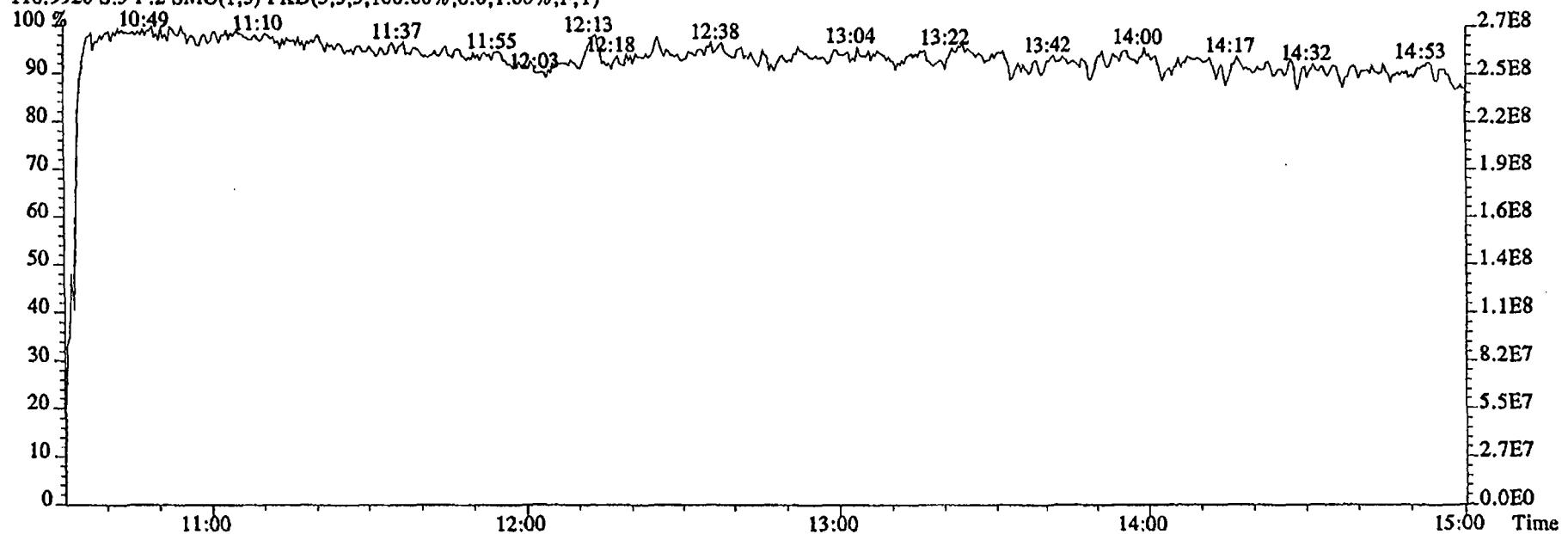
File:08DE045SP #1-462 Acq: 8-DEC-2004 17:57:28 GC EI + Voltage SIR 70SE
 Sample#5 Text:ST1208D :CS4 2350-68D Exp:NDMAVOA
 68.9952 S:5 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



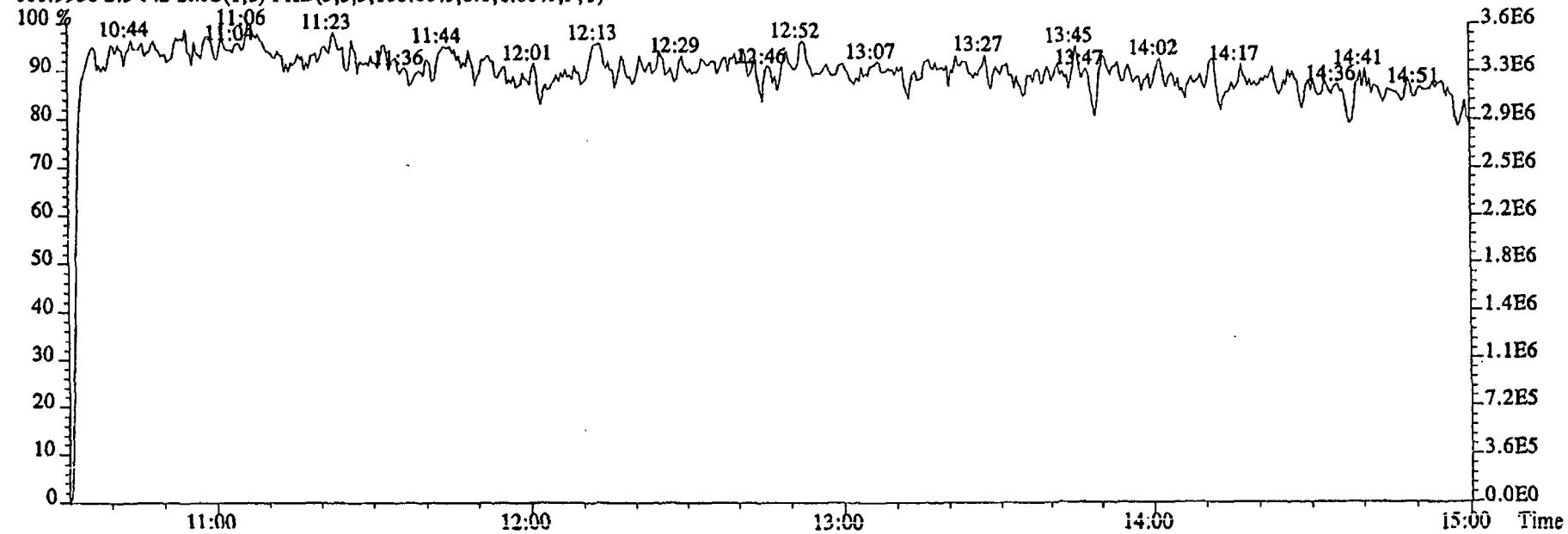
80.9952 S:5 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



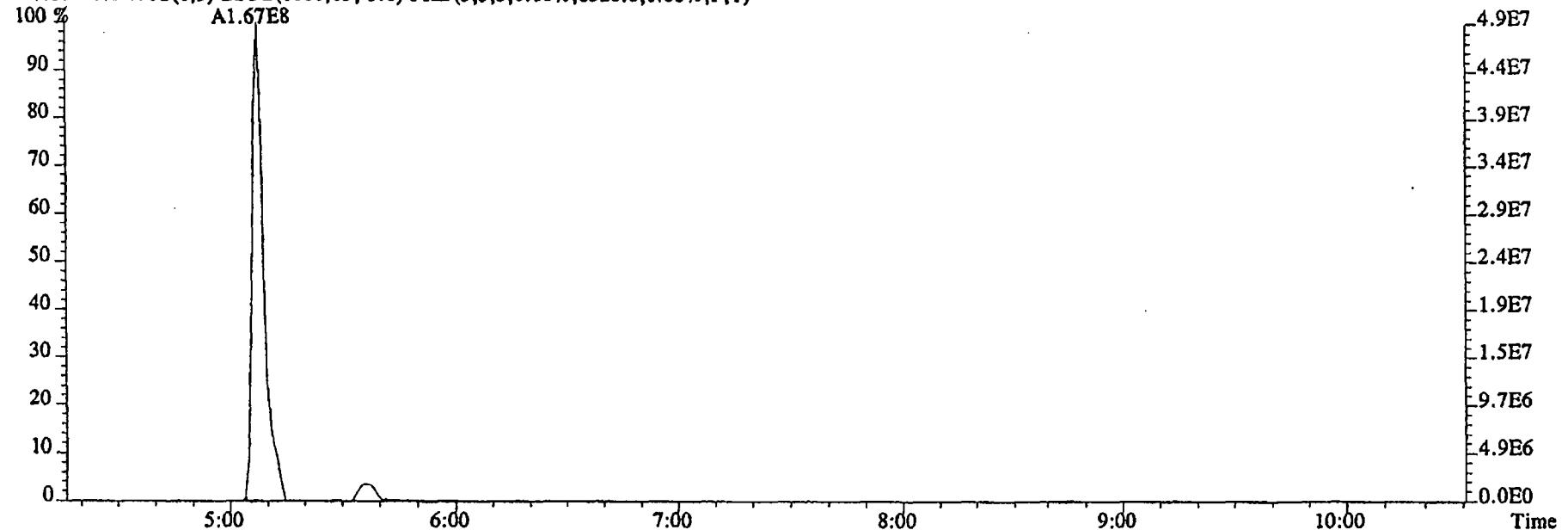
File:08DE045SP #1-625 Acq: 8-DEC-2004 17:57:28 GC EI+ Voltage SIR 70SE
Sample#5 Text:ST1208D :CS4 2350-68D Exp:NDMAVOA
118.9920 S:5 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



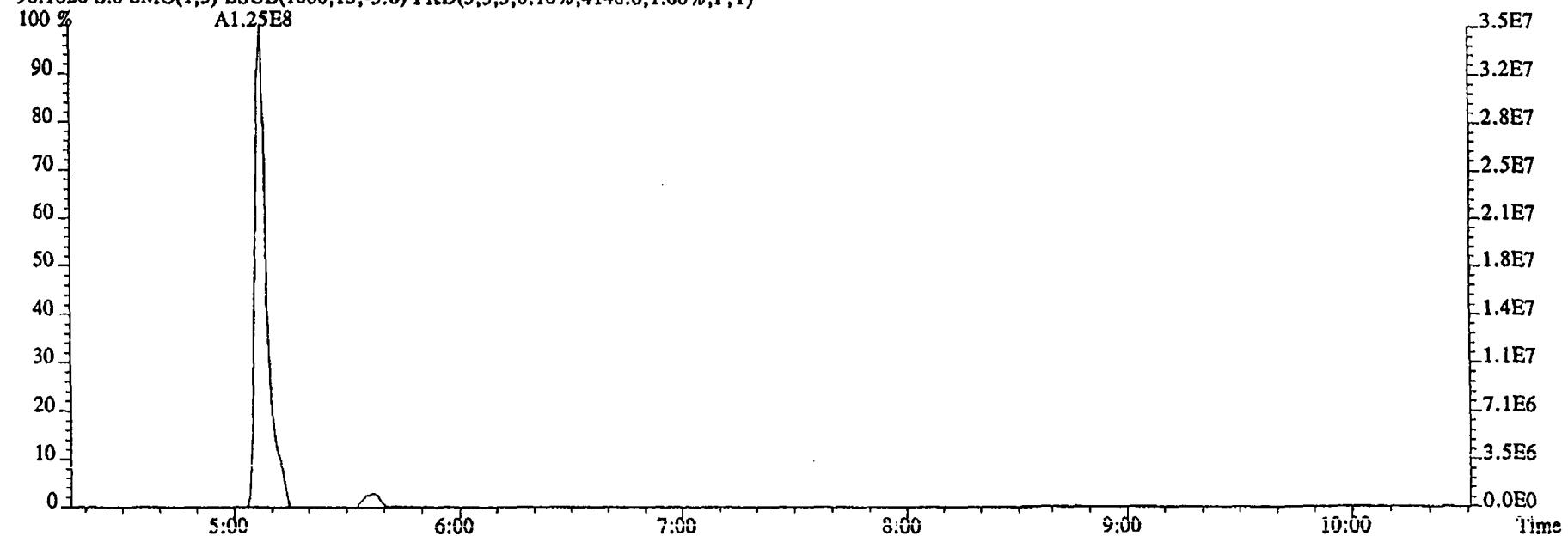
111.9936 S:5 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



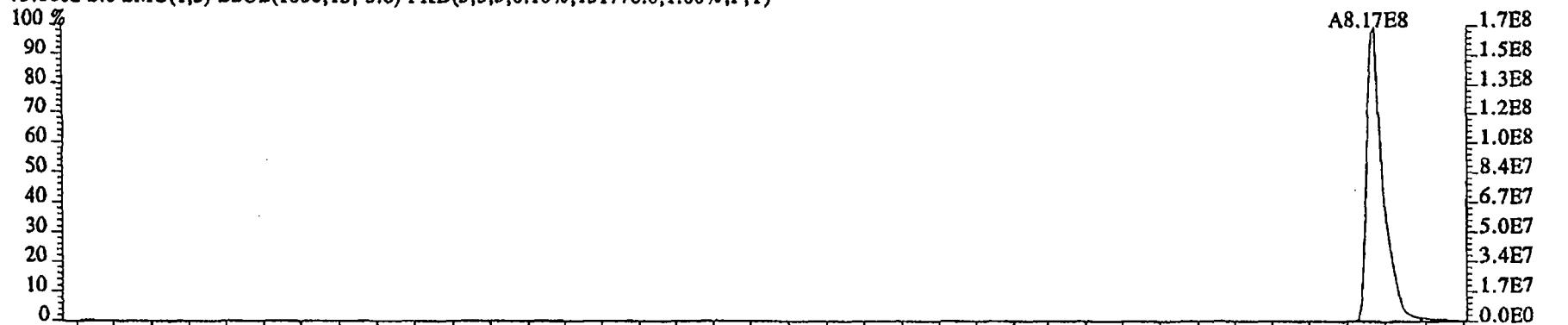
File:08DE045SP #1-462 Acq: 8-DEC-2004 18:17:53 GC EI+ Voltage SIR 70SE
Sample#6 Text:ST1208E :CSS 2350-68E Exp:NDMAVOA
88.0524 S:6 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,8520.0,1.00%,F,T)



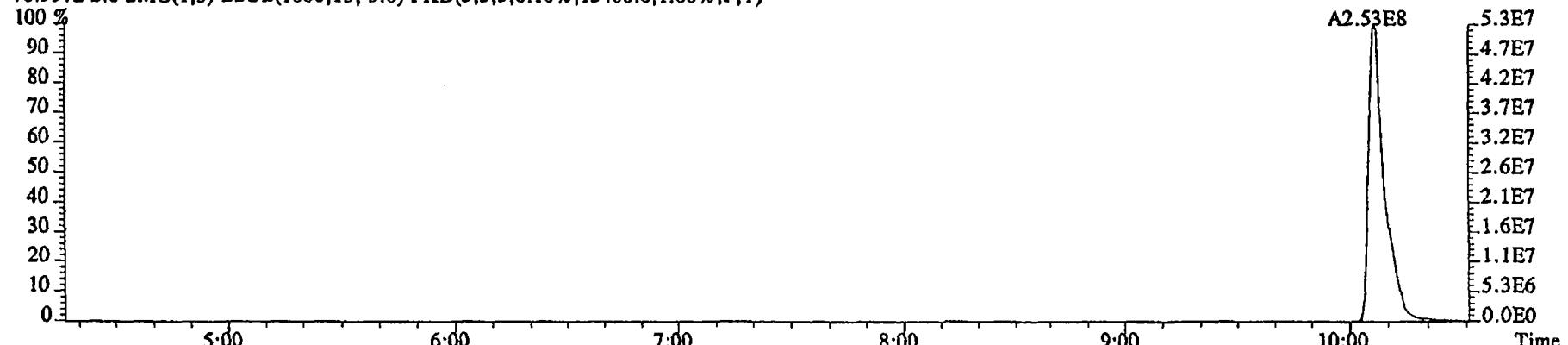
96.1026 S:6 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,4148.0,1.00%,F,T)



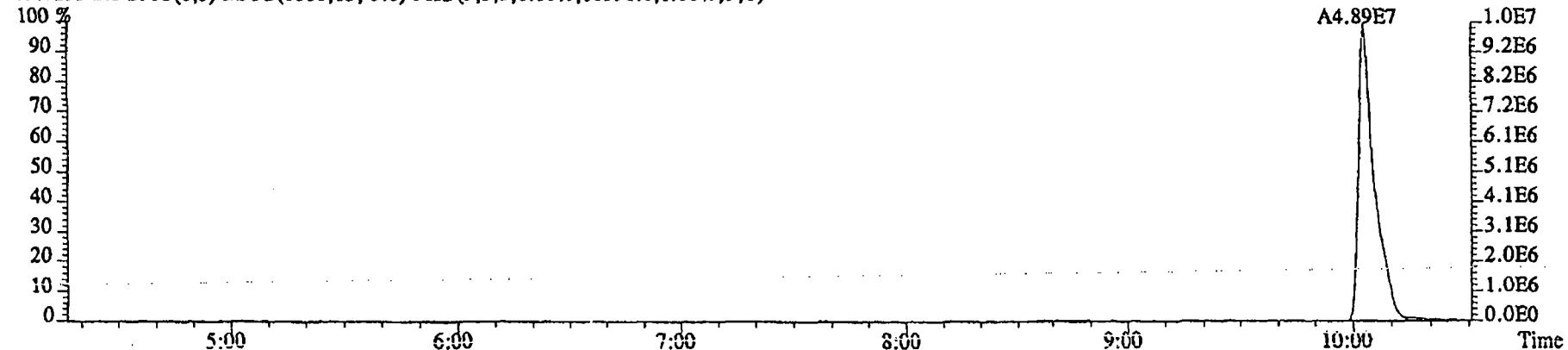
File:08DE045SP #1-462 Acq: 8-DEC-2004 18:17:53 GC EI+ Voltage SIR 70SE
Sample#6 Text:ST1208E :CS5 2350-68E Exp:NDMAVOA
75.0002 S:6 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,131776.0,1.00%,F,T)



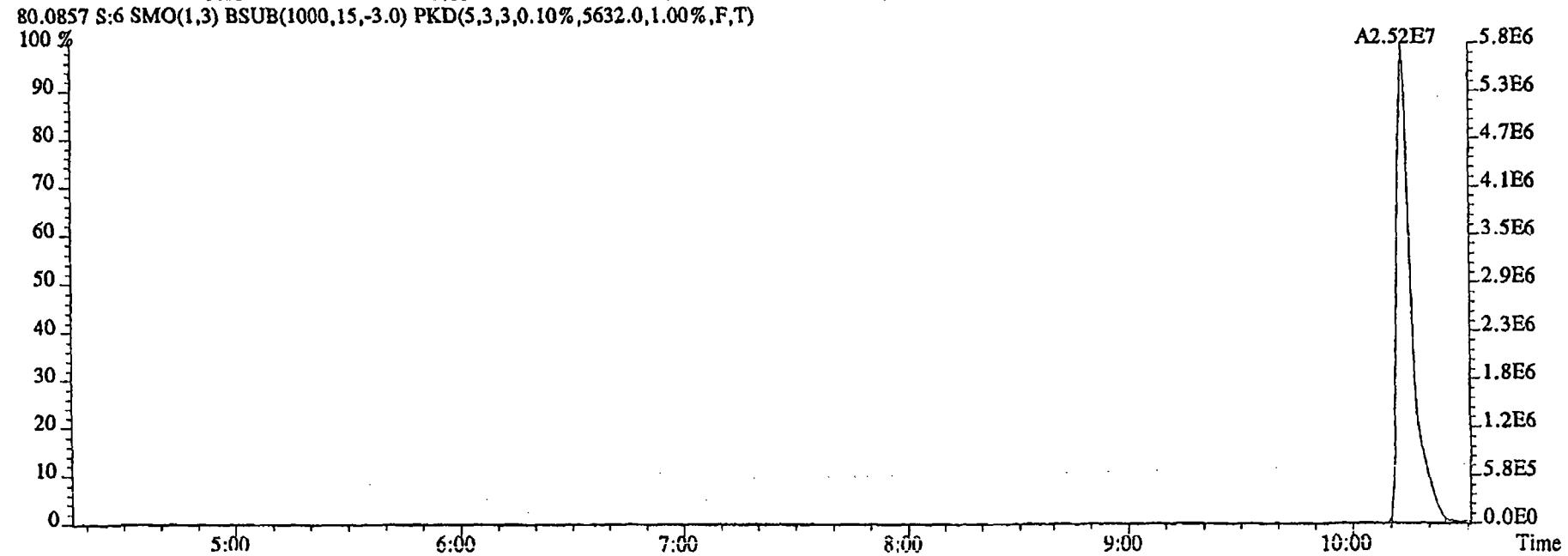
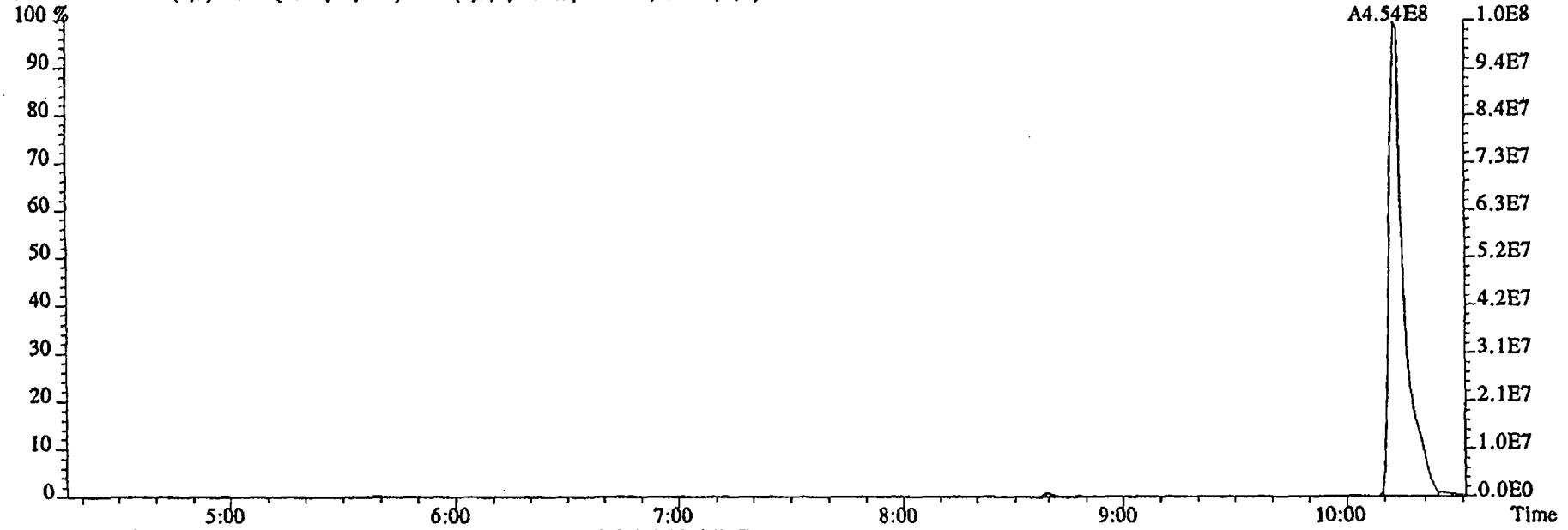
76.9972 S:6 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,13400.0,1.00%,F,T)



79.0253 S:6 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,10596.0,1.00%,F,T)



File:08DE045SP #1-462 Acq: 8-DEC-2004 18:17:53 GC EI+ Voltage SIR 70SE
Sample#6 Text:ST1208E :CS5 2350-68E Exp:NDMAVOA
74.0480 S:6 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,3,0.10%,59956.0,1.00%,F,T)

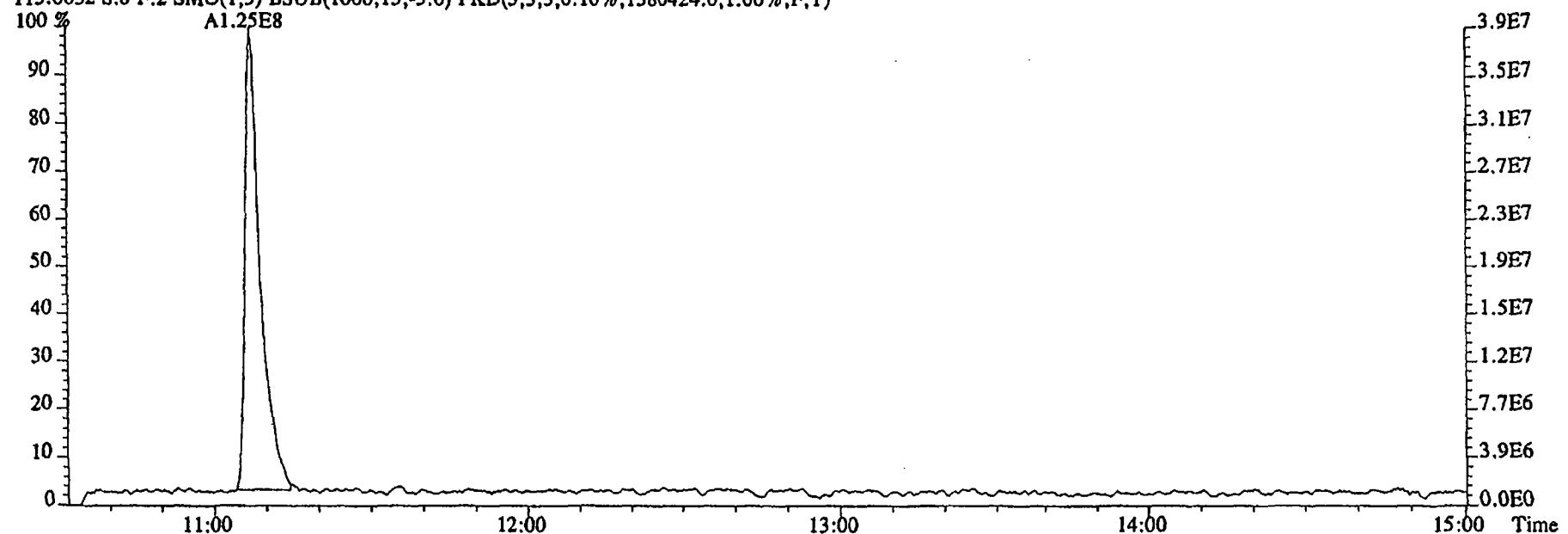


File:08DE045SP #1-625 Acq: 8-DEC-2004 18:17:53 GC EI+ Voltage SIR 70SE

Sample#6 Text:ST1208E :CSS 2350-68E Exp:NDMAV0A

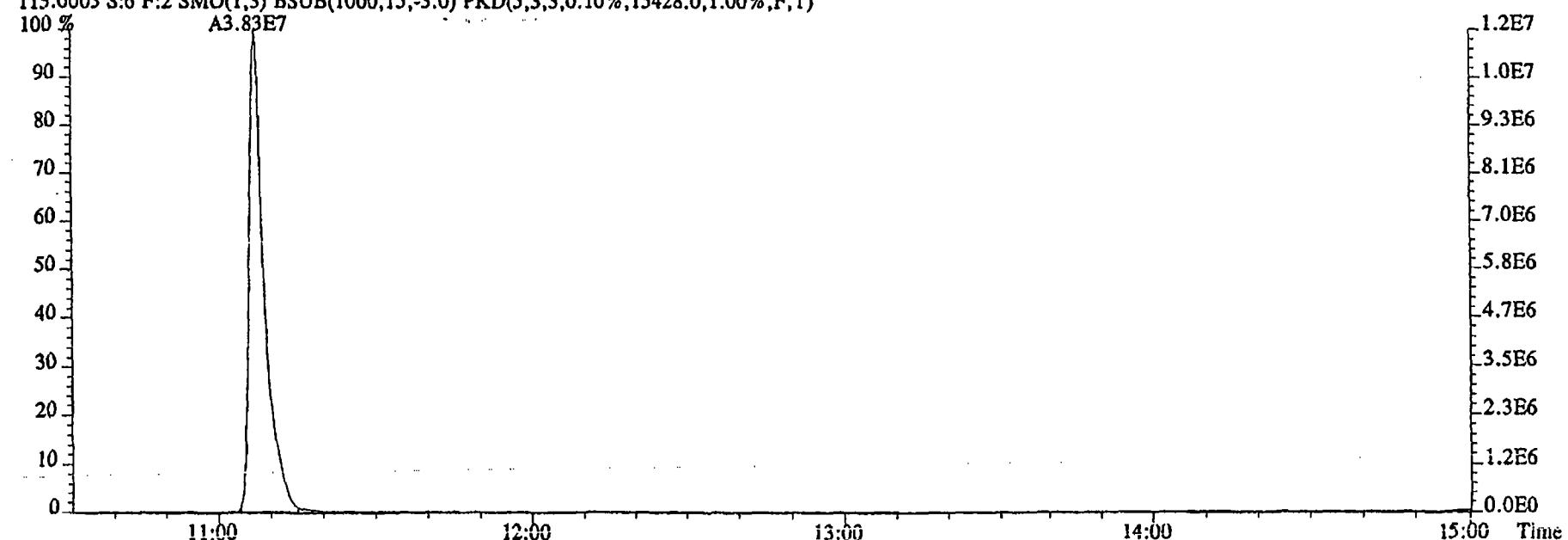
113.0032 S:6 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,0.10%,1380424.0,1.00%,F,T)

100 % A1.25E8

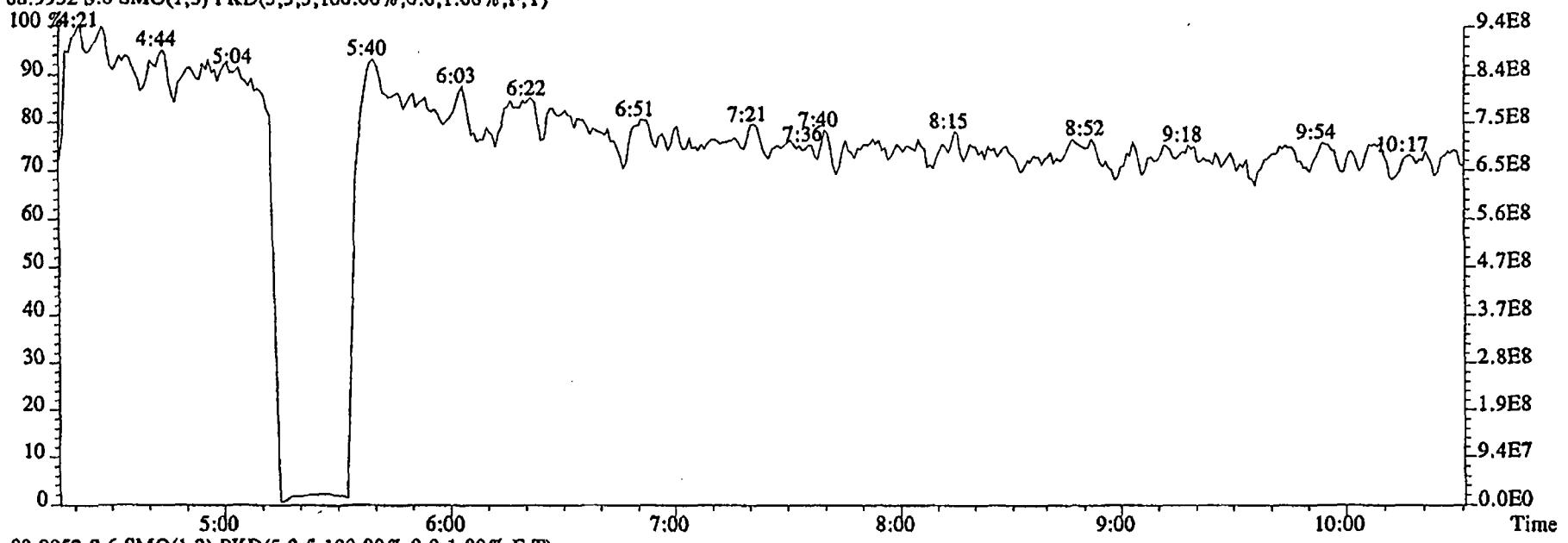


115.0003 S:6 F:2 SMO(1,3) BSUB(1000,15,-3.0) PKD(5,3,0.10%,15428.0,1.00%,F,T)

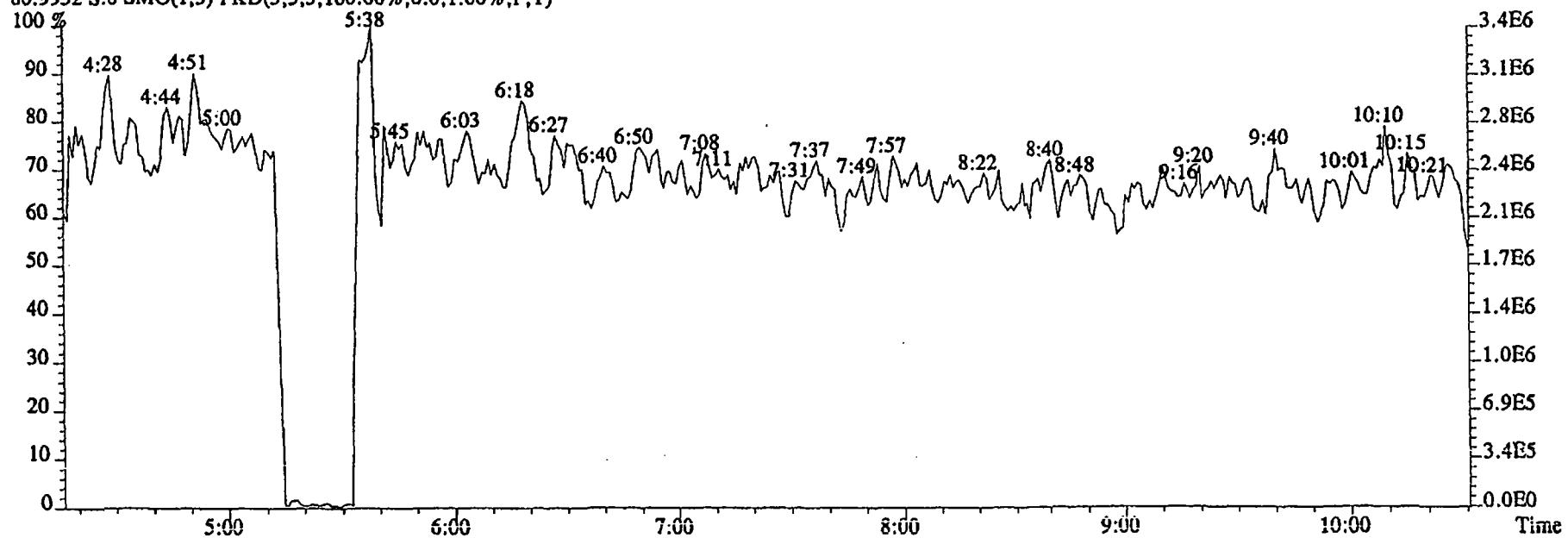
100 % A3.83E7



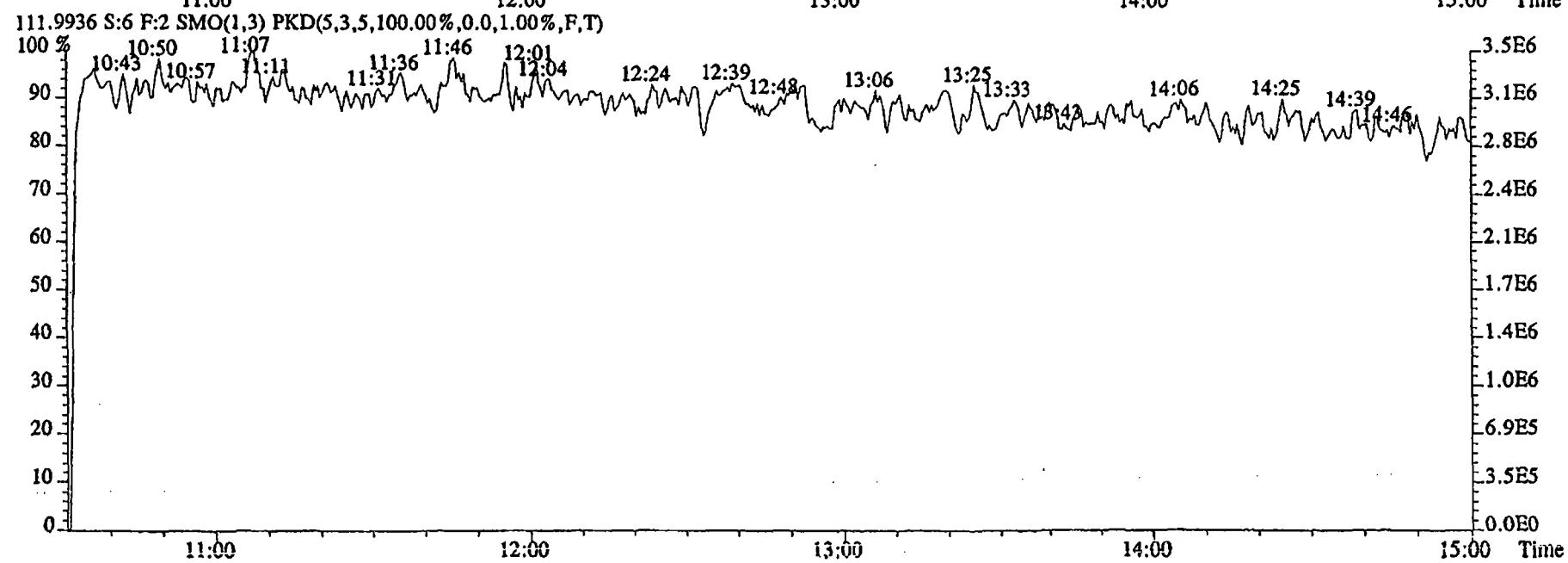
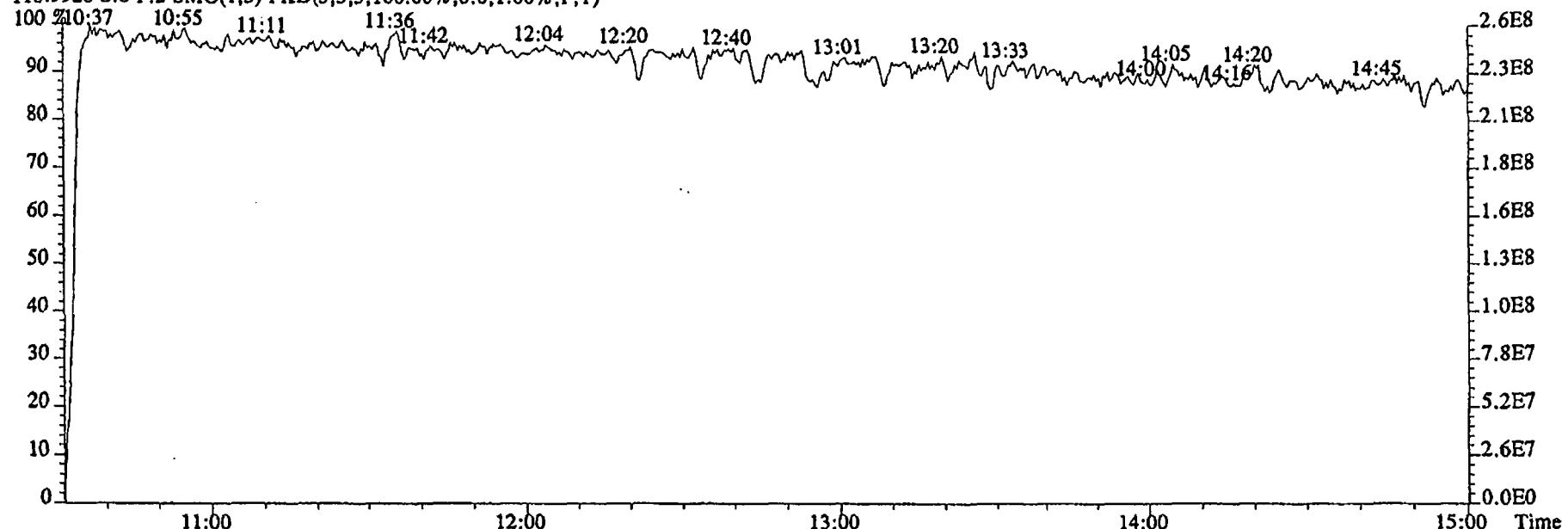
File:08DE04SSP #1-462 Acq: 8-DEC-2004 18:17:53 GC El+ Voltage SIR 70SE
 Sample#6 Text:ST1208E :CSS 2350-68E Exp:NDMAVOA
 68.9952 S:6 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



80.9952 S:6 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



File:08DE045SP #1-625 Acq: 8-DEC-2004 18:17:53 GC EI+ Voltage SIR 70SE
Sample#6 Text:ST1208E :CSS 2350-68E Exp:NDMAVOA
118.9920 S:6 F:2 SMO(1,3) PKD(5,3,5,100.00%,0.0,1.00%,F,T)



Sample Extraction/Preparation Log
Copies and Checklists



STL Sacramento
Data Checklist
High Resolution and Low Resolution Analyses

S E V E R N
T R E N T
S E R V I C E S

Lot ID #: G4L040206 Method ID: Semivolatiles by HRGC/HRMS (1625 Modified)

Sample # 1

(For Internal COC requests only)

Date Delivered to Inst.: _____ Delivered By: _____ Delivered To: _____

DB-5X-2331

DB-225

Data Analyst: CP
 Date initiated: 12/20/04
 Reviewer: JLcJ
 Date reviewed: 12/21/04

NA

QA/QC verification:

	Initiated <u>DB-5</u> <u>SL-2331</u>	Reviewed <u>DB-5</u> <u>SL-2331</u>	Initiated <u>DB-225</u> (High Res Only)	Reviewed <u>DB-225</u> (High Res Only)
-Daily standard package(s) present?	✓	/	NA	NA
-Method Blank present?	✓	/		
-LCS/DCS copy present and meets native recovery criteria?	✓	/		
-Internal standard recoveries within limits?*	NA	/		
-Ion ratios within + 15% of theoretical values?	NA	NA		
-Other QC (Dup,MS,SD) within specs?**	NA	NA		

Sample Analysis:

	Initiated <u>DB-5</u> <u>SL-2331</u>	Reviewed <u>DB-5</u> <u>SL-2331</u>	Initiated <u>DB-225</u> (High Res Only)	Reviewed <u>DB-225</u> (High Res Only)
-Correct sample aliquot used?	✓	/	NA	NA
-All raw data present?	✓	/		
-Standard target DL's used? If RL's are used specify: <u>all same</u>	✓	/		
-DL's below TDL / LCL (please circle)? <u>NA</u>	NA	NA		
-All positives reported at levels greater than method blank DL's?	✓	/		
-Correct RRF's used for method?	✓	/		
-Internal standard amounts correct for method?	✓	/		
-Target analytes are not saturated?	✓	/		
-Dilution/splitting of extract taken into account?	NA	NA		
-Have dilution calculations been verified?	NA	NA		
-Has a manual calculation for the sequence(s) been verified?	✓	/		
-Are retention times (RT) correct?	✓	/		
-Manual integrations checked?	✓	/		

Comments: (Use other side if necessary)

(1) see NCN & 07-41272

* Recovery limits:

NCASI 551: 40-120%***
 Method 8290: 40-135%***
 Method 1613: 25-150%***
 Method 23: 40-130%*** (Cl4-Cl6), 25-130% (Cl7-8), 70-130% (surr.)
 CARB 428: 40-120%***
 CARB 429: 50-150%***
 PCBs: 25-150%***
 DBD/DBF: 20-150%***
 Method 8280: 40-120%***
 DFLM01.0: 25-150%***
 ** 150%***

** RPD limits:

50%
 20%
 50%
 50%
 50%
 50%
 50%

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEETRun Date: 12/07/04
Run Time: 14:22:00LEV 1 2 LEV 1 2

- - Blank
- - Check
- - MS/MSD
- - Weights/Volumes
- - Spike & Surrogate Worksheet
- - Vial contains correct volume
- - Labels, greenbars, worksheets
- - computer batch: correct & all match
- - Anomalies to Extraction Method

- Expanded Deliverable
- COC Completed
- Bench Sheet Copied
- Package Submitted to Analytical Group
- Bench Sheet Copied per COC

Extractionist: _____

* QC BATCH: 4342381 *
* PREP DATE: 12/07/04 12:00
* COMP DATE: 12/07/04 20:00

Concentrationist: _____

Reviewer/Date: _____ / 0/00/00

Semivolatiles by HRGC/HRMS (1625 Modified)
LIQ/LIQ, SEP FUNNEL (PAH,P/P,TPH,Dioxin) - Nominal

EXTR EXPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH'S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/08/04	12/22/04	G4L030417-001 GX97M-1-AA COMMENTS:		09	6A	WATER	968.7mL 20.00uL	NA	NA	NA	DCM	120.0	.0	10UL 2350-65
12/09/04	12/23/04	G4L040125-001 GOAGN-1-AC COMMENTS:	D	09	6A	WATER	995.7mL 20.00uL	NA	NA	NA	DCM	120.0	.0	10UL 2350-65
12/09/04	12/23/04	G4L040125-002 GOAGR-1-AC COMMENTS:	D	09	6A	WATER	978.6mL 20.00uL	NA	NA	NA	DCM	120.0	.0	10UL 2350-65
12/09/04	12/23/04	G4L040125-003 GOAGV-1-AC COMMENTS:	D	09	6A	WATER	973.3mL 20.00uL	NA	NA	NA	DCM	120.0	.0	10UL 2350-65
12/09/04	12/23/04	G4L040125-004 GOAGX-1-AC COMMENTS:	D	09	6A	WATER	972.2mL 20.00uL	NA	NA	NA	DCM	120.0	.0	10UL 2350-65
12/10/04	12/24/04	G4L040206-001 GOA6L-1-AC COMMENTS:	D	09	6A	WATER	985.6mL 20.00uL	NA	NA	NA	DCM	120.0	.0	10UL 2350-65
12/09/04	0/00/00	G4L070000-381 GOFX0-1-AAB COMMENTS:		09	6A	WATER	1000mL 20.00uL	NA	NA	NA	DCM	120.0	.0	10UL 2350-65

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEETRun Date: 12/07/04
Time: 14:22:00

 * QC BATCH: 4342381 * PREP DATE: 12/07/04 12:00
 * COMP DATE: 12/07/04 20:00

<u>EXTR EXPR</u>	<u>ANL DUE</u>	<u>LOT#, MSRUN#/ WORK ORDER</u>	<u>TEST FLGS</u>	<u>EXT MTH</u>	<u>MATRIX</u>	<u>INIT/FIN WT/VOL</u>	<u>PH"S INIT ADJ1 ADJ2</u>	<u>EXTRACTION VOL EXCHANGE</u>	<u>SOLVENTS VOL</u>	<u>SPIKE STANDARD/ SURROGATE ID</u>
12/09/04 COMMENTS:	0/00/00	G4L070000-381 GOFX0-1-ACC		09	6A WATER	1000mL 20.00uL	NA NA NA DCM		120.0	.0 100uL 2350-67 10uL 2350-65
12/09/04 COMMENTS:	0/00/00	G4L070000-381 GOFX0-1-ADL	R	09	6A WATER	1000mL 20.00uL	NA NA NA DCM		120.0	.0 100uL 2350-67 10uL 2350-65

R = RUSH C = CLP
 E = EPA 600 D = EXP.DEL)
 M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 9

WATER, 410.4, Demand, Chemical Oxygen

CH2M Hill Inc

Client Sample ID: OC2-OW8-W-0-91

General Chemistry

Lot-Sample #....: G4L040206-001 Work Order #....: G0A6L Matrix.....: WATER
Date Sampled....: 12/03/04 Date Received...: 12/04/04

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Chemical Oxygen Demand (COD)	81.1	10.0	mg/L	MCAWW 410.4	12/07/04	4342133
				MDL.....: 3.1		

QC DATA ASSOCIATION SUMMARY

G4L040206

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	MCAWW 410.4		4342133	4342096

METHOD BLANK REPORT

General Chemistry

Client Lot #....: G4L040206

Matrix.....: WATER

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
		LIMIT	UNITS	Work Order #: G0EF91AA MB Lot-Sample #: G4L070000-133			
Chemical Oxygen Demand (COD)	ND	10.0	mg/L	MCAWW 410.4	12/07/04	4342133	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: G4L040206

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Chemical Oxygen Demand (COD)	106	(85 - 115)	MCAWW 410.4	Work Order #: G0EF91AC LCS Lot-Sample#: G4L070000-133 12/07/04	4342133

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: G4L040206

Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chemical Oxygen Demand (COD)	49.6	52.7	mg/L	106	MCAWW 410.4	12/07/04	4342133
Work Order #: G0EF91AC LCS Lot-Sample#: G4L070000-133							

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: G4L040206

Matrix.....: WATER

Date Sampled....: 12/01/04

Date Received...: 12/02/04

PARAMETER	PERCENT RECOVERY	RPD	PREPARATION-	PREP
	RECOVERY LIMITS	RPD LIMITS	ANALYSIS DATE	BATCH #
Chemical Oxygen Demand (COD)		WO#: GX6EX1AD-MS/GX6EX1AE-MSD	MS Lot-Sample #:	G4L020335-001
	107 (75 - 125)	MCAWW 410.4	12/07/04	4342133
	99 (75 - 125) 7.2 (0-20)	MCAWW 410.4	12/07/04	4342133

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: G4L040206

Matrix.....: WATER

Date Sampled...: 12/01/04

Date Received..: 12/02/04

PARAMETER	SAMPLE	SPIKE	MEASRD	PERCNT			PREPARATION-		PREP
	AMOUNT	AMT	AMOUNT	UNITS	RECVRY	RPD	METHOD	ANALYSIS DATE	BATCH #
Chemical Oxygen Demand (COD)				WO#:	GX6EX1AD-MS/GX6EX1AE-MSD		MS Lot-Sample #:	G4L020335-001	
	ND	50.0	54.6	mg/L	107		MCAWW 410.4	12/07/04	4342133
	ND	50.0	50.8	mg/L	99	7.2	MCAWW 410.4	12/07/04	4342133

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Manual Colorimetric Analyses

***Hexavalent Chromium
COD
Sulfide
T-Phosphorous***

STL Sacramento

LEVEL 1&2 REVIEW CHECKLIST
GENERAL CHEMISTRYLAB NUMBERS: G4L020335, G4L040125, G4L040206ANALYSIS: COD DATE: 12/7/04 ANALYST: PFrancis

LEVEL 1 RUN REVIEW:

1. Samples are properly preserved and verified
2. Run set-up meets standard criteria (Curve, ICV, ICB, REF...CCV,CCB..)
3. Calibration criteria met
4. Calibration verifications and second source reference are in control
5. Batch QC are in control (Blank, LCS, MSQC, LCS dup when necessary)
6. Calculations have been checked
7. QAS +/or QAPP was consulted and followed for client specifics
8. Standard Tracking # noted on benchsheet +/or runlog
9. Manual integration performed, documented and approved

YES	NO	NA
✓	—	—
✗	—	—
✓	—	—
✓	—	—
✓	—	—
✓	—	—
✓	—	—
✓	—	—
✓	—	—
✓	—	✓

LEVEL 1 DATA REVIEW:

1. Benchsheet complete
2. QAS +/or QAPP consulted and followed for client specifics for data entry
3. Data entered properly
4. Copy of prep sheet and prep checklist attached to run
5. Analyst observations, HTV's, Anomalies properly documented and attached to run.

✓	—	—
✗	—	—
—	—	✓
—	—	—
—	—	—

Completed By & Date: PFrancis 12/7/04

LEVEL 2 REVIEW:

1. Level 1 checklist complete and verified
2. Deviations, Anomalies, Holding times checked and approved
3. Reprep/Reanalysis documented and chemist notified
4. Client specific criteria met
5. Data entry checked and released in Quantims
6. Indication on benchsheet on review and release (dated & signed)
7. Manual integration reviewed, approved, and properly documented

X	—	—
—	—	X
X	—	—
X	—	—
X	—	—
X	—	—
X	—	X

Completed By & Date: BS 12/10/04

Comments: _____

RQC050

Severn Trent Laboratories, Inc.
WET CHEM BATCSHEETRun Date: 12/07/04
Time: 8:53:23

STL Sacramento

PRODUCTION FIGURES - WET CHEM

<u>TOTAL NUMBER</u>	<u>SAMPLE NUMBER</u>	<u>QC</u>	<u>RE-RUN MATRIX</u>	<u>RE-RUN OTHER</u>	<u>MISC NUMBER</u>	<u>TOTAL HOURS</u>	<u>EXPANDED DELIVERABLE</u>

METHOD: VO Demand, Chemical Oxygen (410.4)
 QC BATCH #: 4342133 INITIALS: DATA ENTRY:
 PREP DATE: 12/07/04 7:30 PREP _____ INITIALS _____
 COMP DATE: 12/07/04 9:30 ANAL _____ DATE _____
 USER: FRANCISF

MS# 4342094

<u>Work Order</u>	<u>Lab Number</u>	<u>Structured Analysis</u>	<u>Exp. Del.</u>	<u>Analysis Date</u>	<u>Sample ID:</u>
		Analysis	Date	Sample ID:	
GX6EX-1-AA	G-4L020335-001	XX I 21 VO 01	Y-D	_____	OC2-OW6-W-0-82
GX6EX-1-AE	G-4L020335-001-D	XX I 21 VO 01	Y-D	_____	OC2-OW6-W-0-82
GX6EX-1-AD	G-4L020335-001-S	XX I 21 VO 01	Y-D	_____	OC2-OW6-W-0-82
GX6FF-1-AA	G-4L020335-002	XX I 21 VO 01	Y-D	_____	OC2-OW1B-W-0-83
GX6F1-1-AA	G-4L020335-004	XX I 21 VO 01	Y-D	_____	OC2-OW3-W-0-85
G0AGN-1-AA	G-4L040125-001	XX I 21 VO 01	Y-D	_____	OC2-OW5-W-0-86
G0AGR-1-AA	G-4L040125-002	XX I 21 VO 01	Y-D	_____	OC2-OW5-W-1-87
G0AGV-1-AA	G-4L040125-003	XX I 21 VO 01	Y-D	_____	OC2-OW8B-W-0-88
G0AGX-1-AA	G-4L040125-004	XX I 21 VO 01	Y-D	_____	OC2-OW2-W-0-89
G0A6L-1-AA	G-4L040206-001	XX I 21 VO 01	Y-D	_____	OC2-OW8-W-0-91
G0EF9-1-AA	G-4L070000-133-B	XX I 21 VO 01	_____	_____	INTRA-LAB BLANK
G0EF9-1-AC	G-4L070000-133-C	XX I 21 VO 01	_____	_____	INTRA-LAB CHECK

Control Limits

(75-125)

(75-125)

(85-115)

PDE115

Severn Trent Laboratories, Inc.
 Inorganics Batch Review
 QC Batch 4342133

Date 12/07/2004
 Time 10:46:15

Method Code: VO Demand, Chemical Oxygen (410.4)
 Analyst: Filomena Francis

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
GX6EX-1-AA	1.2423	mg/L	10	12/07/04	.00	N		ND	10.0	1.00
GX6FF-1-AA	3.7660	mg/L	10	12/07/04	.00	N		3.8 B	10.0	1.00
GX6F1-1-AA	6.6051	mg/L	10	12/07/04	.00	N		6.6 B	10.0	1.00
G0AGN-1-AA	4.3969	mg/L	10	12/07/04	.00	N		4.4 B	10.0	1.00
G0AGR-1-AA	1.5675	mg/L	10	12/07/04	.00	N		ND	10.0	1.00
G0AGV-1-AA	ND	mg/L	10	12/07/04	.00	N		ND	10.0	1.00
G0AGX-1-AA	5.9742	mg/L	10	12/07/04	.00	N		6.0 B	10.0	1.00
G0A6L-1-AA	81.054	mg/L	10	12/07/04	.00	N		81.1	10.0	1.00
G0EF9-1-AA	ND	mg/L	10	12/07/04	.00			ND	10	1.00

Notes:

B Estimated result. Result is less than RL.

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
GUEF9-1-AC	49.6	52.6624	106.17	12/07/04	(85-115)	1.00	

Notes:

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured SPIKE	Measured Dup.	Pct. SPIKE	Recovered DUP	RPD	Prep. - Anal.	Dil.
GX6EX-1-AD	1.2423	50	54.555	50.770	106.62	99.05	7.18	12/07/04	1.00	

Notes:

TEST	PRODUCTION TOTALS						
	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0

STL Sacramento

CURVE CALCULATION BENCHSHEET
(SOP # SAC-WC-0040)

ANALYST FRANCIS F
REVIEWED BY BRE
BATCH NO. 4342133

ANALYSIS DATE 12/07/04
REVIEW DATE 12/10/04
MS RUN NO. 4342096

METHOD NO. EPA 410.4
INSTRUMENT ID: SP2
ICV SOURCE: 2392-WC-59-4

FILE 120704A
CCV SOURCE: 2392-WC-59-7

Lab ID	Time	True Conc. mg/L	Background Absorbance	Sample Aliquot		Extract Volume mL	Dilution	Absorbance	Raw Result	<u>COD (Low)</u>			
				gram	mL								
1 Std0	10:33	0						0.478	-0.33500	Intercept = 1.5046E+02			
2 Std1	10:33	10						0.444	10.39066	Slope = -3.1546E+02			
3 Std2	10:32	50						0.317	50.45414	$r = -0.999949$			
4 Std3	10:32	100						0.163	99.03507				
5 Std4	10:32	150						0	150.45513				
6													
7										Linear Not Forced Weighting = 1			
8										Absorbance corrected for background absorbance			
9										mg/L	mg/kg	Recovery	Check
10 [LCS/ICV:G4L023	10:33	49.6				2	2	1	0.31	52.66237	52.6624		106%
11 [BLK/ICB:G4L023	10:34					2	2	1	0.485	-2.54323	-2.5432		< RL
12 GX6EX	10:34					2	2	1	0.473	1.24230	1.2423		< RL
13 GX6EX-S	10:34	50				2	2	1	0.304	54.55513	54.5551		109%
14 GX6EX-D	10:35	50				2	2	1	0.316	50.76960	50.7696		102%
15 GX6FF	10:35					2	2	1	0.465	3.76598	3.7660		< RL
16 GX6F1	10:35					2	2	1	0.456	6.60513	6.6051		< RL
17 G0AGN	10:35					2	2	1	0.463	4.39691	4.3969		< RL
18 G0AGR	10:36					2	1	1	0.467	3.13506	1.5675		< RL
19 G0AGV	10:36					2	2	1	0.488	-3.48961	-3.4896		< RL
20 G0AGX	10:36					2	2	1	0.458	5.97421	5.9742		< RL
21 G0A6L	10:36					2	2	1	0.22	81.05382	81.0538		
22 CCV	10:37	50				2	2	1	0.317	50.45414	50.4541		101%
23 CCB	10:37					2	2	1	0.474	0.92684	0.9268		< RL
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													